UNIVERSITY OF PENNSYLVANIA

THE WHARTON SCHOOL

MKTG101

Professor Kahn **Spring 1997**

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Marketing Department
University of Pennsylvania
The Wharton School

MARKETING 101

Spring 1997

Professor Barbara Kahn

People often define "marketing" as advertising — a highly visible activity by which organizations try to persuade consumers to buy products and services. However, marketing is more than advertising, and even the most skillful marketing cannot make consumers buy things that they don't want. Rather, marketing involves identifying consumer needs, and then satisfying these needs with the right product and/or service, available to consumers through the best distribution channels, promoted in ways that motivate purchase as much as possible, and priced at the right level.

These decisions — product, distribution, promotion, and price — comprise the "Marketing Mix." Together with rigorous and complete analysis of the environment, customers, and competitors, they are the key activities of marketing management, and they are crucial ones: failure to find the right combination of the "mix" may result in product (or service) failure. In turn, that means loss of revenue, loss of jobs, and economic inefficiency.

The objective of this course is to introduce students to the concepts, analyses, and activities that comprise marketing management, and to provide practice in assessing and solving marketing problems. The course is also a foundation for other Wharton courses, and for advanced electives in Marketing.

Course Content

The course is roughly divided into two sections. The first section focuses on the concepts, tools, and analyses that underlie marketing decisions. We will focus on "the demand side": the underlying dynamics of the environment, consumer behavior, and competitive behavior that affect marketing decisions. We will also illustrate the tools marketers use to design marketing programs: how to partition, or segment, markets; how to size-up competitors; and how to design and conduct marketing research. In this initial section of the course, many students will recognize concepts and techniques from core disciplines such as psychology, sociology, economics, and statistics. It should be instructive to see how these discipline-based concepts are applied to the assessment and solution of real-world problems.

The second part of the course focuses on using these concepts, tools, and analyses to make marketing decisions: What products should be marketed? How should they be priced? What promotion — including advertising, personal selling and sales promotion — should be done? How should the product be distributed? These are the most essential elements of a marketing program. The design, or mix, of these elements must yield an internally consistent strategy for reaching consumers.

Classes

Topics for each week of the course are identified in this syllabus. Monday's lecture will be given by Professor Kahn and will provide an overview of the weekly topic. It is important that you do the assigned readings for the week *in advance* of the lecture, since that session will build on the text and other reading materials.

Your recitation section instructors meet each week with your professor. Each recitation section is a carefully planned case study. The quantity and quality of your participation in case study discussions is an important part of the learning process in this course (and an important element of your final grade), so you should read the assigned materials in preparation for case studies in this syllabus.

There will also be unannounced quizzes and/or homework assignments in recitation sections. Their purpose is to help you discipline yourself to keep-up with the readings each week. Marketing is a practical skill that is learned through study and application in a cumulative fashion. Experience suggests that the value of the course is greatly diminished if students attempt to substitute pre-exam cramming for regular preparation.

Attendance is required at all scheduled class sessions, and at the mid-term and final examinations. All students, whether taking the course pass-fail or not, must complete the quizzes, midterm and final examinations, and other assignments that may be required in order to receive a grade in the course.

Exams and Grading

Grades are based on performance in recitation sections and on the written case analysis, midterm, and final examination. Recitation section instructors will evaluate the quality and quantity of each student's classroom participation. It is important to understand that frequent participation in class is not as important as the quality of participation. That is, you should strive to make effective use of discussion time in class, through thoughtful, timely, and constructive participation.

Participation is especially important in case study discussions. At each case discussion a few students may be cold-called to begin analysis and discussion of the case. Every student is responsible for preparing a complete analysis of every case, ranging from identification of the problem, to an analysis of that problem, to the generation of alternative solutions, to the selection of a particular action. The requirements also include one written case analysis.

Students who miss a pop quiz will be given a zero for that missed work, and no make-up quizzes will be given. The midterm and final grades will be curved within individual recitation sections. Makeup examinations must be requested in writing from Professor Kahn and will require ***written medical proof. Do not take the course unless you can sit for the exams on the dates indicated below.***

The grading elements are as follows:

• Midterm Examination	20%
• Final Examination	25%
• In-Class Participation	20%
• Unannounced Quizzes/ homework	15%
• Written Case Analysis	15%
• Market Research Requirement	5%

The schedule for the midterm, final, and written case analysis is as follows:

• Midterm	Wednesday, Feb. 26, 6:00-8:00 p.m.
• Final	Friday, May 2, 4:00 - 6:00 p.m. *Bring a self-addressed stamped envelope if you want your exam returned.*
• Written Case	Due Monday, April 14, by 5:00 p.m. in the Marketing Suite, 1400 SH-DH • Write a five-page (absolute maximum) analysis on Intel. No late papers will be accepted. • Assume that the instructor has read the case and do not repeat the case description. Questions that should be answered in your analysis are included on the last page of this syllabus.

Market Research Requirement

All students in Marketing 101 are required to participate in a market research project. There are two alternative ways to participate. The *first* is to be a subject for academic research projects for a maximum of 2 hours. You will be assigned to participate in specific research projects by your TA. There are two goals motivating this requirement. The first goal is to provide the students with first-hand experience in marketing research. Simply participating in the market research process can be instructive. Each study that the student participates in will be fully explained to the student after the study is completed. Another goal is that your participation in academic research projects will help Wharton Marketing Faculty continue to develop state-of-the-art marketing thought—which is ultimately brought back to the classroom. The *second* alternative way to fulfill this requirement is to write a 10-page paper on a market research topic of your choice, but the topic must be approved by your TA. The grading for either alternative will be Pass/Fail.

Textbook

The course textbook is Perreault and McCarthy, *Basic Marketing: A Global Managerial Approach* (12th Edition), Irwin, 1996.

An *optional textbook* is Barbara Kahn and Leigh McAlister, *The Grocery Revolution: New Focus on the Consumer*, Addison Wesley Longman, 1997.

There are two bulkpacks and a fee (all payable to Wharton Reprographics) for this course. The first bulkpack is mandatory and consists of cases and extra readings. The second bulkpack is voluntary; it consists of copies of the overheads that are shown in Professor Kahn's lectures. The fee, which will be billed to you at the end of the semester, is the cost of reproducing in-class handouts.

ASSIGNMENT SCHEDULE

Lecture Date	Recitation Date	Readings from Textbook for Lecture	Bulkpack Readings for Recitation	Topic
Mon., Jan 13	Tues., Jan. 14 Thurs., Jan. 16	P&M Chs. 1 and 2	Note on Marketing Arithmetic and Related Terms (including problem set)	What is Marketing?
Mon., Jan. 20	Tues., Jan. 21 Thurs., Jan. 23	P&M Chs. 4 and 22	Perdue Farms, Inc.	Marketing Environment, Marketing Ethics
Mon., Jan. 27	Tues., Jan. 28 Thurs., Jan. 30	P&M Ch.10, pp. 308-321	Sealed Air	Product Life Cycle
Mon., Feb. 3	Tues., Feb. 4 Thurs., Feb. 6	P&M Ch.3	Southwest Airlines	Segmentation/Positioning
Mon., Feb. 10	Tues., Feb. 11 Thurs., Feb. 13	P&M Chs. 6 and 7	MEM	Consumer Behavior
Mon., Feb. 17	Tues., Feb. 18 Thurs., Feb. 20	P&M Chs. 8 and 15	Pixley Richards	Organizational Buying Behavior, Personal Selling
Mon., Feb. 24	Tues., Feb. 25 Thurs., Feb. 27		BARCO	Competitive Analysis
Mon., March 3	Tues., March 4 Thurs., March 6	P&M Ch. 5	Southwestern Montana Coors	Marketing Research
Spring Break, March 10 - 14				
Mon., March 17	Tues., March 18 Thurs., March 20	P&M Chs. 9 and 10, pp. 321-334	SWATCH	Product Strategy
Mon., March 24	Tues., March 25 Thurs., March 27	P&M Chs. 14 and 16	Federal Express	Advertising Strategy
Mon., March 31	Tues., April 1 Thurs., April 3	P&M Chs. 11 and 12	Becton Dickinson & Co.: VACUTAINER Systems Division	Channels Strategy
Mon., April 7	Tues., April 8 Thurs., April 10	P&M Ch. 13	Deere & Co.	Guest Lecture: Stan Lieberman, Spiegel
Mon., April 14	Tues., April 15 Thurs., April 17	P&M Ch. 17 and 18		Pricing Strategy
Mon. April 21	Tues., April 22 Thurs., April 24	P&M Ch. 19, 20, and 21	Course Review	Marketing Audit, Wrapup

WEEKLY CASE PREPARATION GUIDE

First Day of Recitation

You must do the exercise at the end of the "Marketing Arithmetic" note by the first recitation section. It is crucial for you to be comfortable with basic marketing arithmetic. You will need to understand it to calculate break-even volumes for a number of the cases in the course.

* * *

Perdue Farms, Inc.

The Perdue case touches on all the elements of the marketing mix. It also requires an analysis of customer buying behavior, competition, trade motivations, economic factors and demand.

The following questions should help you as you prepare the case:

1. What segmentation exists in the hot dog market? Where does the chicken hot dog fit in?
2. What are the economics of the chicken hot dog? What will be the breakeven volume? How does this breakeven volume compare to the demand?
3. What marketing mix alternatives are available to Perdue?
4. What other considerations should be of concern to Mr. Moriarty?
5. What would you recommend if you were Mr. Moriarty?

* * *

Sealed Air

1. What are the basic underlying problems that are forcing Sealed Air to consider uncoated bubbles?
2. What are the arguments for Sealed Air producing an uncoated bubble?
3. What are the arguments against Sealed Air producing an uncoated bubble?
4. What are appropriate offensive and defensive strategies (with regard to the uncoated bubble threat) for Sealed Air to consider?

* * *

Southwest Airlines

Southwest Airlines is a "classic" case. Written in 1975, it focuses on the battles of an entrepreneurial airline against the then dominant carrier in the Texas market, Braniff. As you may know the tables eventually turned and Braniff went bankrupt, whereas Southwest is now a major regional carrier. Southwest was also an important symbol for the deregulation movement and helped bring about deregulation of the airline industry in 1979.

As we look at this case, the time is 1971 and Southwest is not doing so well; nor do they seem to have a cohesive strategy yet. Be prepared to discuss the following questions:

1. Strategy: In June 1971, what kind of customer did Mr. Muse intend to serve, and what product did Mr. Muse assume that the typical customer wanted?
2. Quantitative Demand Analysis: How large was the Dallas-Houston market, and how much of it did Southwest Airlines need to succeed?
3. Qualitative Demand Analysis: To what extent were Mr. Muse's decisions affected by knowledge of market segments and actual customers and their decision-making processes?
4. June 1971 Marketing Mix Analysis: Evaluate the issues that Mr. Muse thought were important as he made decisions on:
    - what product to offer
    - what price to charge
    - what distribution system to use
    - what advertising and promotion campaign to use
5. By the decisions he made during the second half of 1971 and all of 1972, Mr. Muse shows what he learned about the market, its segments, and how to compete. What did he learn?
6. How should Mr. Muse respond to Braniff's program in February 1973?

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MEM Company

This week's case is about the MEM Company and its flagship brand, English Leather, a men's toiletry product. The challenge for the company is that sales have remained flat and it is time to consider several options to improve sales growth, including expansion of distribution into food stores and the introduction of a new brand.

1. Analyze the strengths and weaknesses of MEM's position in the men's toiletries market.
2. How is the market segmented?
3. Think about the buying decision process consumers use in purchasing a fragrance.
4. What are MEM's strengths?

* * *

Pixley Richards

As consumers, we most often think of marketing in the context of companies that market to us: Procter & Gamble, Coca-Cola, and so on. But there are companies that sell products to P&G and Coca Cola (such as raw materials and industrial equipment). Our focus this week is on how businesses market to each other. In some cases companies such as IBM have dual marketing programs: selling personal computers to consumer market segments such as students and hobbyists, and to industrial market segments such as airlines, hotels, and government agencies.

Industrial marketing is complex because many people may be involved in a lengthy buying decision process. (P&G doesn't invest several million dollars overnight in a new piece of equipment to make detergents!). The heart of the matter is buyer behavior, and this week we look at the industrial (or organizational) buyer and buying process.

Pixley-Richards is a small manufacturer of plastic and metal components for customers in the electronic, computer and telecommunications industries. The following questions should help you prepare for discussion of this case:

1. What are the problems facing Pixley-Richards that led them to consider going into the sub-assembly opportunity?
2. How attractive would you say the molding business is overall?
3. How would you describe the way Pixley-Richards has handled the plastics business to date? What kind of marketing strategies have they used?
4. What is the nature of the subassembly business? The buying process? Is it as attractive as molding? Can Pixley-Richards serve this market well?

* * *

BARCO

1. What is BARCO's strategic mission? What is BARCO's vision of the market?
2. What is Sony's strategy? Why did they bring out the 1270?
3. What are BARCO's options?

* * *

Southwestern Montana Coors

The primary question presented in this case is whether Larry Brown should apply for a Southwestern Montana Coors beer distributorship. He has the option of getting some market research from Manson and Assoc. in helping him to make this decision.

You will be asked to join a group in class and assume the role of Larry Brown. It is your group's task to decide (a) what research Larry should order from Manson and Assoc. and (b) whether he should apply for the distributorship. Although this work will be done in-class, you should prepare by thoroughly reading the case and anticipating the decisions that need to be made.

We shall begin class by asking each group to place an order for the market research studies it needs to estimate the feasibility of a Coors beer distributorship.

The instructor shall then give out the "completed research reports" ordered by each group.

We shall then break for about half an hour during which time each group will have the opportunity to examine the research results and decide whether or not the distributorship is feasible.

In the remainder of the class session, the discussion will revolve around each group's decision and how it was made.

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Swatch

The discussion questions that might be helpful in your case analysis are indicated below.

1. How has the concept of a watch evolved over time? What are the implications for the watch industry and possible competitive strategies?
2. How similar/dissimilar are the Swatch entry strategies in the USA and Europe?
3. What are the targets in Europe and the USA? How is Swatch positioned in these two markets for the watches and the accessories?
4. How would you define Swatch's competitive advantages(s) and what are your recommendations regarding its future product line extensions?

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Federal Express

We are bombarded by advertising — by some estimates, the "average" consumer is exposed to 750 ads per day (just think of all the ads you could look at in a daily newspaper). Actually, mass media advertising is just one of the "promotion mix" tools that also include personal selling (the sales force) and sales promotion (like coupons). This week we'll focus on advertising, but note in the Federal Express case that you also have information on the sales force (cost of a salesperson's call) and your marketing plan should reflect your objectives for ALL of the elements of the promotion mix.

This is a retrospective look at a marketing "classic." Federal Express is a tremendous marketing success story, so the point of this week's case is not to show that you know "what happened," but to put yourself in the shoes of the Federal Express manager who came up with the Courier Pak idea in the late 1970's — the time of the case. Consider and prepare the following questions carefully, from the point of view of the time of the case:

1. What, exactly is the Courier Pak/Federal Express "product?"
2. How profitable is the Courier Pak, compared to other Federal Express products?
3. What is the competition? How do you assess competitors?
4. What are the consumer behavior patterns? What are the implications of them for your marketing plan?

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Becton Dicksinson & Co: VACUTAINER Systems Division

1. What are the important changes in the health care market and what are the implications for Becton Dickinson (BD) and its BDVS Division?
2. How important is the APG contract for BDVS? What's at stake for BDVS in winning or losing this contract?
3. How important is each aspect of its negotiations (pricing, brand name, and delivery terms) for each party involved in the negotiation?
4. What should BDVS do?

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Deere & Co.

1. What price would you choose for the JD 750? What options did you reject in your analysis? Why?
2. What is Deere's general pricing and product strategy? Evaluate it. Can you propose a better one?
3. What elements of the marketing mix will determine the JD 750 success?
4. Evaluate Deere's pricing process.

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Intel

The following discussion questions should be considered in your write-up of this case **(due Mon. April 14, 1400 SH-DH, five pages maximum)**

1. What are Intel's concerns that are underlying their consideration of a branding strategy?
2. Who is Intel's competition? What are their likely reactions?
3. What is the customer decision process for purchasing a computer?
4. What is the OEM's likely reaction to Intel's branding strategy?
5. What information does Intel need to know before deciding whether it makes sense to launch the Intel Inside campaign?

* * *

NOTES ON PREPARATION FOR CASE DISCUSSION

The case situations that will be discussed have been developed by careful research on actual situations in real companies. The case writer has attempted to describe enough of the background and details of the situation in order to give an understanding that provides an adequate basis for class discussion.

Thorough preparation on the part of all class participants is essential to having a good class discussion. ***Reading the case is not enough***. After an initial reading to get the broad pattern, go back and study the case thoroughly, developing your understanding of the problems confronting the individuals in the case. Make any notes you find helpful and mark up the case to facilitate structuring your understanding of the situation. Identify the major problems and key relationships. Conceive alternative solutions to the problem and identify the advantages and disadvantages of each.

Do not be surprised if you feel that the case lacks some facts that you would like to have to make possible a better decision. Management decisions frequently must be made on the basis of only these facts which are on hand at the time the decision must be made, and frequently these facts are not as complete as might be desired. Remember that the ability to make effective decisions without all of the facts is an essential executive skill.

Don't look for "the subject" of a case or expect to get "the answer" in class. Business situations are complex and frequently involve a series of interrelated problems. Likewise, there are usually a number of alternative possible solutions, each involving different degrees of risk, cost, and simplicity of execution. The opportunity to see the variety of ideas expressed by your colleagues, and to be exposed to the challenge of defending your ideas in the face of questions they may ask, provides the major part of the benefit from case discussions.

Remember that the effectiveness of the case discussion is proportional to the thoroughness of preparations by the members of the class.

Harvard Business School 574–082
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WHARTON REPROGRAPHICS

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Note on Marketing Arithmetic and Related Marketing Terms

This note is about several terms and basic calculations used in the analysis of marketing problems. It is almost always necessary to determine the economic consequences of alternative courses of action, or of alternative sets of assumptions, in the analysis of a marketing problem.

Contribution

The funds available to the seller of an item after subtracting the variable costs associated with it are referred to as *contribution*. A common reference is also made to *unit contribution*—that is, the contribution per each item sold. Assume, for example, that we sell a unit of a product to wholesalers at a price of $100, and that the *variable* manufacturing costs of that unit are $30. In addition, it costs us $3 per unit to ship the product to wholesalers, and we pay a 5% commission to our salespeople ($5 per unit). Under these circumstances, the variable costs associated with each unit of this product are $38 ($30 + $3 + $5). Since we receive $100 revenue for each unit we sell, our unit contribution is $62 ($100 − $38).

This $62 unit contribution is available to cover the fixed manufacturing expenses, overheads, and marketing costs associated with the product, and if all goes well, to provide a profit. *Fixed costs* are costs that remain fixed regardless of the volume of production. Thus, whether we produce 1,000 or 5,000 items, the cost of executive salaries remains fixed, as does rent, insurance, and other so-called overhead expenses. Fixed costs remain unchanged over some reasonable range of the firm's activity. *Variable costs*, on the other hand, are costs that are directly traceable to the volume of activity—the more we sell, the more raw materials we need, usually the more assembly work we need, and the more sales commission we pay.

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Break-Even

Break-even means that our revenue is just enough to pay for both the variable and the fixed costs we have incurred, but only that. We have no profit, we have no losses; we have only broken even.

As a bare minimum, most companies expect a product to break even, that is, not to lose money. Depending on the situation, the appropriate time within which a product should break even may be short (a year, or a season) or long (perhaps as much as five years). For the sake of simplicity, we will assume that the appropriate time period for break-even is one year. It is important to note that under most conditions break-even is not an appropriate goal.

One way to talk of break-even is to say that it occurs when the number of units we sell, multiplied by the unit contribution, is equal to the fixed costs. Thus we calculate break-even as follows: BE = Total fixed costs ÷ unit contribution. If unit contribution is $62, for example, and fixed costs are $100,000, break-even will occur when we produce and sell 1,613 units, (that is, $100,000 ÷ $62). If we expect to produce and sell 1,613 units, we expect to break even. But if we produce 2,000 and sell 1,613, we have not broken even. We have incurred losses because our total variable costs are now $38 × 2,000, not $38 × 1,613.

Profit Impact

Few companies are content to operate at break-even. Normally, they require that each product produces a positive impact on company profits. The impact that a particular product will have on company profits is easily calculated, as follows, using the same figures we have been using:

Unit contribution × units produced and sold − fixed costs = Profit impact

($62 × 2,000) − $100,000 =

$124,000 − $100,000 = $24,000

Why do we call this $24,000 *impact on profit* (or *profit impact*) and not just plain *profit*? The answer is that there may be a few other costs yet to be charged against the product, such as corporate headquarters overhead, not just product-related overhead.

Suppose we have a certain profit target in mind—a profit impact of $50,000. What will our production and sales have to be to achieve a profit impact of $50,000? The calculation is the same as the above, except that we add the $50,000 profit target to the fixed costs. With fixed costs now at $150,000 instead of $100,000, the resulting calculation gives us 2,419 units. We would then say that if we wish to achieve a profit impact of $50,000, we will have to make and sell 2,419 units.

A similar technique may be used to calculate the effects of a change in our marketing program. Assume that with our present program we expect to make and sell 2,000 units of a product with a $62 unit contribution. With our fixed costs of $100,000, we saw that this yields a $24,000 profit impact. We now consider raising our advertising expenditure by $50,000, which would increase our fixed costs to $150,000. If we do so, how much volume would the new marketing program have to achieve to generate the same profit impact ($24,000) as our present program? The calculation is as follows:

Present fixed cost + present profit impact + additional fixed cost ÷ unit contribution = Req. volume

$100,000 + $24,000 + $50,000 ÷ $62 = 2,806

We would have to make and sell 2,806 units for the new program to yield the same profit impact as the old one which required sales of only 2,000 units. There are other ways to come up with the same answer, of course, but this way at least has the virtue of clarity.

Suppose we improve our product by adding $3 per unit of variable cost. This cuts our unit contribution to $59. If all other costs as well as prices remain unchanged, how much would we have to sell in order to maintain our current profit impact of $24,000? We would then have to sell 2,102 units ([$100,000 + $24,000] ÷ $59).

In calculating the economic effects of a marketing program, one is generally forced to make a number of assumptions. The sales forecast is generally the most critical, but fixed costs, variable costs, and selling prices may also be uncertain. Under these circumstances, it is generally useful to calculate the profit impact of a marketing program under varying sets of assumptions.

Obviously, one can make break-even points or expected profit impact come out any way one wishes by making the appropriate assumptions about sales volumes and costs. For this reason the marketing manager should become adept at appraising the realism of the assumptions on which calculations of these types are based.

Market Share Analysis

One way of assessing the realism of a sales forecast is to calculate its implications for a firm's market share. Assume, for example, that the total market for the product mentioned in the previous examples is 10,000 units, that the market is not expanding, and that we presently sell 2,000 units. We therefore have a market share of 20%. The product manager recommends that we raise our advertising budget by $50,000, which means that we would have to make and sell 2,806 units to maintain our current profit impact. We shall have to make and sell 806 units above the present level, raising our market share from 20% to 28.06%. How likely is this? Can $50,000 of additional advertising accomplish that? Will our competitors give up 8% of market share without fighting back?

When demand for a product is not static, calculation of probable effect on market share is more difficult. If we increase advertising by $50,000, for example, total demand for the product may increase. If this happens, some of our sales increase may come from increased market share, but some may also come from increased demand. Would the competition then be as likely to retaliate?

Computation of Margin

When a manufacturer produces an item for sale, or when a merchant buys an item for resale, a desired selling price is chosen. This price exceeds the manufacturing cost, or the cost paid by the merchant, by what is called the *margin*. The terms *markup* and *markon* are also often used interchangeably with *margin*, which will be used here. Margin is similar to, though not necessarily the same as, unit contribution (a distinction we shall not clarify here).

Margin, cost, and selling price are related to each other in the following manner:

$$\text{Selling price} = \$1 \begin{cases} \boxed{\text{Margin} = 40\text{¢}} \\ \boxed{\text{Cost} = 60\text{¢}} \end{cases}$$

Thus, we say that the retailer's selling price of an item consists of the cost of the item (i.e., what was paid for it) and the margin. For many purposes it is useful to express the margin as a percentage. Theoretically, the 40-cent margin might be expressed either as a percentage of the cost or as a percentage of the selling price. If it is expressed as a percentage of the cost, the margin would be 66.67%; that is, the 40-cent margin divided by the 60-cent cost equals 66.67%. When it is expressed as a percentage of the selling price, the margin is 40%—40 cents ÷ $1. *The commonly accepted practice is to express percentages—both margins and costs—with net sales as the base. While this is the commonly accepted practice, some industries, companies, and individuals depart from that practice. We will follow the common practice.*

If the cost is known and the percentage of margin on selling price is given, it is a simple matter to compute the selling price. Suppose, for example, that a retail merchant buys goods at a cost of $10 and wants a margin of 33⅓% in order to cover expenses and have a chance of making a net profit. What should be the selling price? Since 100% of the selling price is made up of two parts (the cost and the margin), this means that $10 + 33⅓% = 100%. It follows that the $10 cost must be 66⅔% of the selling price.

What is 100%—the selling price itself? We have said that:

66⅔% × Selling price = $10
Then: Selling price = $10 ÷ 66⅔%
Selling price = $15

Similarly, if a wholesaler buys an article for 60 cents and wants a margin of 20%, the selling price is 60 cents ÷ 80% = 75 cents.

Margin percentages are figured on the selling price at each level of business. If it costs a company 75 cents to manufacture an item and it wants a 25% margin, then the selling price must be $1. If the wholesaler to whom the manufacturer sells the item for $1 wants a margin of 16⅔%, the selling price will be $1.20. And if the retailer who buys it from the wholesaler for $1.20 resells it to consumers at $2, that margin will be 40% (.80 ÷ $2.00).

Since some firms and industries use cost rather than selling price as the basis for their percentage calculations, it is useful to know how to convert from one base to the other. On merchandise costing $6 and selling for $10, the margin is $4. This margin, which is 40% of the selling price, would be 66⅔% if computed on the basis of the cost. To make the conversion from either the cost base or the selling-price base to the other, it helps to understand once more that selling price is composed of two parts—the margin and the cost:

$$\begin{array}{ccccc} \text{Cost} & + & \text{Margin} & = & \text{Selling price} \\ \downarrow & & \downarrow & & \downarrow \\ \$.60 & + & \$.40 & = & \$1.00 \end{array}$$

$$\begin{array}{c}\text{Margin as a percent} \\ \text{of selling price}\end{array} = \frac{.40}{\$1.00} = 40\%$$

If we want to convert this margin, expressed as a percent of selling price into a margin expressed as a percent of cost, we say:

> If 40% is the margin on selling price, then the remaining 60% must be the cost. 40% ÷ 60% = 66⅔% = margin based on cost.

The following formula invariably gets this conversion right:

$$\begin{array}{ccc} \dfrac{\text{Percentage margin on price}}{100\% - \text{Percentage margin on price}} & = & \begin{array}{c}\text{Percentage} \\ \text{margin on cost}\end{array} \\ \downarrow & & \downarrow \\ \dfrac{40\%}{100\% - 40\%} = \dfrac{40\%}{60\%} & = & 66\tfrac{2}{3}\% \end{array}$$

Suppose we have the opposite question: How to express a margin figured as a percent of cost into one figured as a percent of selling price? We say:

> Cost is 100%—that is, the denominator on which the margin was figured.
>
> Since the margin on cost (in the above example) is 66⅔%, then the selling price must be Cost + Margin = Selling price. (100% + 66⅔% = 166⅔%)
>
> Margin on percent of selling price = 66⅔% ÷ 166⅔% = 40%

The following formula invariably gets this conversion right:

$$\begin{array}{ccc} \dfrac{\text{Percentage margin on cost}}{100\% + \text{Percentage margin cost}} & = & \begin{array}{c}\text{Percentage margin} \\ \text{on selling price}\end{array} \\ \downarrow & & \downarrow \\ \dfrac{66\frac{2}{3}\%}{100\% + 66\frac{2}{3}\%} = \dfrac{66\frac{2}{3}\%}{166\frac{2}{3}\%} & = & 40\% \end{array}$$

Discounts and Chain Discounts

A common practice for the manufacturer is to suggest at what price the product should be sold by a retailer. If the *suggested retail price* is $100 while selling the item to the retailer for $60, the manufacturer is, in effect, proposing a *suggested retail margin* of 40%—that is, ($100 − $60) ÷ $100 = 40%. In common usage it will be said that the manufacturer is offering a *trade discount* of 40%. Indeed, the manufacturer may actually quote a price to the retailer as $100 less 40%. If the retailer chooses to sell the item for $90 instead of $100, it will still have to pay $100 less 40%, or $60. The margin will be $30 ÷ $90 = 33⅓%.

Occasionally, discounts from a suggested resale price will be computed in two or more increments. For example, a manufacturer might offer discounts of 40% + 5% on a product priced to be resold at $100. This means that in addition to the original discount (suggested margin) of 40% (here $40), the manufacturer has allowed an additional 5%. This does *not* mean 40% plus 5%, or 45%. It means $100 − 40% less 5% of $100 − 40%. Thus the retailer pays ($100 − $40) − [5% × ($100 − $40)] = $60 − $3 = $57. The 40% + 5% is called a *chain discount*. The specific percentage link in the chain that is referred to here (5% in the present example) is calculated on the price that is derived after the application of the prior link or links to the suggested retail price. This rather cumbersome practice of stating discounts (or margins) probably arose originally to advise customers of changes in a discount structure. Over the years the method has become traditional in certain industries.

Terms of Sale

When a manufacturer sells to a wholesaler or distributor, who then sells to a retailer, prices are also generally listed as discounts from a suggested retail price. A product suggested to sell for $100 at retail, with a suggested retail margin of 40% and a suggested wholesale margin of 20%, will be sold by the wholesaler to the retailer at a price of $60 ($100 less 40%), and will be purchased by the wholesaler from the manufacturer for $48 ($60 less 20%). Once again, the margin for a particular institution in the channel of distribution is applied to the price at which the institution sells its goods and services.

Terms of sales are a shorthand method of setting forth the conditions under which a company offers to sell its goods or services. In addition to price, they include a statement of trade discounts, the date by which the amount is to be paid, and shipping responsibilities. For example, terms of sale of $50 per unit, 2/10 e.o.m., 60 days net, f.o.b. seller's plant indicate that (1) the price for which the product is being sold is $50; (2) a 2% trade discount off the price ($1) will be offered if the bill or invoice is paid within a period ending 10 days after the end of the month when the invoice is issued; (3) the total amount of the bill is due within 60 days of the invoice date; and (4) the title and responsibility for the subsequent transportation of the product passes from the seller to the buyer at the former's plant.

Here, the letters *e.o.m.* stand for *end of month*. In their absence, qualifying for the 2% special discount would require paying the bill within 10 days after the date on the invoice. The letters *f.o.b.* stand for *free on board*, a traditional means of expressing the physical location where certain responsibilities for transportation and damage-claim litigation pass from seller to buyer. While these are just two of many different discount and shipping terms, they are perhaps the most commonly used in business today.

Exercises

Horatio Alger has just become product manager for Brand X. Brand X is a consumer product with a retail price of $1.00. Retail margins on the product are 33%, while wholesalers take a 12% margin.

Brand X and its direct competitors sell a total of 20 million units annually; Brand X has 24% of this market.

Variable manufacturing costs for Brand X are $0.09 per unit. Fixed manufacturing costs are $900,000.

The advertising budget for Brand X is $500,000. The Brand X product manager's salary and expenses total $35,000. Salespeople are paid entirely by a 10% commission. Shipping costs, breakage, insurance, and so forth are $0.02 per unit.

1. What is the unit contribution for Brand X?
2. What is Brand X's break-even point?
3. What market share does Brand X need to break even?
4. What is Brand X's profit impact?
5. Industry demand is expected to increase to 23 million units next year. Mr. Alger is considering raising his advertising budget to $1 million.

   a. If the advertising budget is raised, how many units will Brand X have to sell to break even?

   b. How many units will Brand X have to sell in order for it to achieve the same profit impact that it did this year?

   c. What will Brand X's market share have to be next year for its profit impact to be the same as this year?

   d. What will Brand X's market share have to be for it to have a $1 million profit impact?
6. Upon reflection, Mr. Alger decides not to increase Brand X's advertising budget. Instead, he thinks he might give retailers an incentive to promote Brand X by raising their margins from 33% to 40%. The margin increase would be accomplished by lowering the price of the product to retailers. Wholesaler margins would remain at 12%.

   a. If retailer margins are raised to 40% next year, how many units will Brand X have to sell to break even?

   b. How many units will Brand X have to sell to achieve the same profit impact next year as it did this year?

   c. What would Brand X's market share have to be for its profit impact to remain at this year's level?

   d. What would Brand X's market share have to be for it to generate a profit impact of $350,000?

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3

WHARTON REPROGRAPHICS

PERDUE FARMS, INCORPORATED

Late in the summer of 1976, Don Mabe, executive vice-president of Perdue Farms, Incorporated, telephoned the assistant divisional controller, Mike Moriarty: "Mike, I want you to make this decision on whether or not we should get into chicken hot dogs," Mabe said. Moriarty, a young MBA who was rising in the company, eagerly undertook research to bring himself up to date on Perdue's possible first entry into the processed meat market. But a month later, Moriarty was still undecided. Although he was convinced that Perdue had developed a superior chicken hot dog, he was uncertain of the demand for the product. Perdue's supply of birds might not be sufficient to meet demand for the franks, so outside purchases might be required. In addition, Perdue could do only preliminary processing of live chickens in its own plant; the company lacked final processing capability for hot dogs. Therefore, it would have to depend on other meat processors to produce the franks.

Moriarty was also worried that advertising costs might make the entire project unprofitable if the advertising agency's projections were correct. In any event, he was unsure whether to advertise Perdue's new chicken product as a totally new product or to try to promote the product as an alternative to hot dogs made of other meat. In addition, Moriarty wanted to protect Perdue's widely respected image and wondered if a line of hot dogs would damage that image of quality. Finally, consumer groups were pressuring the U.S. Department of Agriculture to halt use of mechanically deboned meat (MDM) in consumer products. They alleged that mechanically deboned meat was nutritionally inferior and contained possibly harmful bone bits. Moriarty was concerned that, at best, the planned use of MDM in Perdue's hot dog would cheapen its image. At worst, a USDA ban might force Perdue to rethink the whole hot dog idea.

Company History

Perdue, Inc., was founded in 1920 by Arthur W. Perdue to sell hatching eggs to chicken farmers in and around Salisbury, Maryland. In 1933, the company began to sell live

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chickens—"broilers"—for human consumption. Five years later, Arthur's son Frank joined the business at the age of 19. He became president 10 years later.

Since the early 1940s, Perdue had been vertically integrating in an attempt to counter the cyclicality of the poultry industry. In 1941, the company became a commercial feed dealer to provide an internal source of chicken feed. In 1943, the first hatchery was added. Facilities were constructed between 1958 and 1961 for processing feed from soybeans and other ingredients. In the late 1960s, Perdue executives noticed that prices were quite stable in the dressed-poultry market and that prices were subject to great fluctuations in the live-poultry market. Therefore, they decided that Perdue should get out of the live-poultry market entirely. By 1971, dressed poultry from two new processing plants made up 100 percent of the company's products.

Perdue's backward integration was paralleled by a marketing strategy based on product differentiation and consumer pull. This strategy was unprecedented in the poultry industry. The company developed a physically differentiated chicken with a different color skin, more tender meat, and more meat per bird. The higher meat yield and different color skin were the result of Perdue's unique feed blend, a closely guarded recipe that was developed by company scientists. At the retailer's case, consumers could contrast the golden yellow color of the Perdue bird with the paler color of other processors' products. Perdue broilers were usually more tender because they were never frozen during processing or in shipment. Many consumers claimed that these features made the Perdue chicken a superior tasting bird. Perdue birds could also be distinguished by their wing tags, which said "Perdue" in large red letters and which offered a money-back guarantee if customers were unsatisfied.

Perdue executives had established strict quality standards, and this image of quality was carried to consumers through heavy television and radio advertising. The advertisements featured Frank Perdue, whose homespun message was his simple person-to-person concern for quality in chickens. Perdue's advertising-to-sales ratio was the highest in the poultry industry.

This marketing strategy enabled Perdue to command premium prices at the retail level and had helped the company show a profit in every year since it was founded. (The company's recent sales and asset figures are shown in Exhibit 1.) According to industry observers, Perdue had shown growth and stability above the average for the industry.

Distribution

The company's marketing strategy, based on physical differentiation and quality, led the company to seek retail outlets where competition was not based on price, such as independent neighborhood grocers and butcher shops. Such outlets were most frequently found in the northeast section of the United States, in cities such as Boston and New York. In 1976, Perdue's sales were concentrated in those urban areas, channeled through between 40 and 50 independent distributors who handled poultry for several processors on a markup of about 3¢

per pound. But looking into the future, company executives wondered at the wisdom of limiting distribution to these outlets, which constrained growth, especially since the company's estimated 15 percent share of market in New York and Boston was close to maximum penetration through these channels in those two cities. Future growth would probably have to come through other channels, such as supermarkets.

Expansion into supermarkets, however, presented two problems for the company. First, supermarkets themselves were experiencing declining profits because of rapidly rising operating costs, intense competition within the industry,[1] and a consumer trend toward eating at restaurants and fast-food chains. Supermarkets were reacting to this competitive challenge by expanding product lines and by offering nonfood items and more further-processed food products requiring less home preparation time. Processed food items also carried higher margins to grocers than unprocessed items.

A second concern for Perdue executives with regard to supermarkets was Perdue's packaging. Perdue birds were shipped from processing plants in wooden or cardboard containers and were covered with ice. This method chilled but never froze the birds, a fact stressed in Perdue's advertisements. When shipments arrived at the grocer's meat department, the birds were removed from this "ice pack" and either packaged whole or cut up and packaged as chicken parts. Other chicken processors were selling prepackaged chicken to grocers, thus saving the grocer the labor cost of cutting and packaging. Perdue was not equipped to do this prepacking at its plants on a large scale. Executives wondered how this lack of capacity might affect Perdue's ability to enter supermarkets in the future.

The Perdue Hot Dog

Perdue began to consider further-processed foods in response to an industry trend away from dependence on dressed fowl. A trade magazine stated in an editorial: "If one trend is emerging, it appears to be . . . product diversification and company diversification."[2] One of Perdue's largest competitors, Tyson's, Inc., had established a large line of processed foods, and Bayshore and Longacre, nearby competitors, were already marketing chicken hot dogs. Another competitor, Holly Farms, had established its own chain of fast-food chicken outlets. (Exhibit 2 shows the degrees of home preparation required by new food products introduced between 1971 and mid-1976.)

In 1976, Frank Perdue approved a proposal to develop a Perdue hot dog but said the final product would be subject to three conditions. First, the Perdue frank had to equal or surpass the quality of any other hot dog on the market. Second, the new product line's revenues had to cover all costs, including overhead. Finally, the product had to be made of 100 percent Perdue meat. Frank Perdue was seriously concerned that the hot dog's image as a cheap and nutrition-poor food might tarnish the company's hard-earned and invaluable reputation as a producer of quality broilers. This concern was shared by all of Perdue's management.

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[1] *The Wall Street Journal*, July 18, 1977, p. 1.

[2] *Broiler Industry*, November 1976.

No one at Perdue had any experience with hot dogs, so development was assigned to Don Poole, a laboratory manager. Poole worked with several different hot dog formulas, combining varying ratios of chicken and cockrel (rooster) meat with various spices. Each formula was tried out at the Perdue offices and then tested in the field with the help of the company's advertising agency. After some initial failures, Poole hit upon a formula that received favorable results in the product test, rating higher than what management defined as the best hot dog on the market, Oscar Mayer's.

Poole also conducted a test to measure the influence of the Perdue name on consumers' perceptions of the product. In that test, consumers were given two hot dogs, one labeled "Perdue" and the other labeled "Oscar Mayer." The sample of hot dogs labeled "Perdue" ranked higher than the sample labeled "Oscar Mayer," even though both samples were in fact identical Oscar Mayer hot dogs. Poole concluded that the Perdue name would be a significant marketing asset in the hot dog market. Poole felt confident that the final Perdue formula was superior in taste, color, and texture to any chicken or beef hot dog on the market.

Production

Meat for chicken hot dogs came from broiler backs and necks and from cockrels. Back and neck meat was most efficiently removed from the bone by mechanical deboning, a process that retrieved back and neck meat at a cost much lower than that of hand removal. Mechanical deboning was a relatively simple process.

However, processing cockrels posed several problems. Cockrels were more than twice as heavy as broilers, and Poole believed that the added weight would slow down the processing lines considerably. Because of their greater age, cockrels tended to be tougher birds, and the mechanical windpipe cutters at times could not cut the cockrel's throats. Perdue's present supply of cockrels required about 30 minutes of processing per week. However, the plant scheduled to process cockrels had little excess capacity. If hot dog demand was much greater than anticipated, Poole thought that these cockrel-processing difficulties would force use of overtime or a second shift. On a straight shift, processing costs for broilers were $5,000 per hour.

The supply of cockrels was also a concern to management. Perdue's internal supply of cockrel meat was enough for a maximum production of 67,000 pounds of hot dogs per week at the product-tested formula of 15 percent cockrel meat. However, Poole believed demand might be as high as 200,000 pounds per week. Since cockrel meat was necessary for the correct texture, Moriarty hesitated to reduce the percentage of cockrel meat without first testing the new formula. Also, the cockrel-meat supply was steady throughout the year, while demand for hot dogs was seasonal.

The actual manufacturing of the hot dogs would have to be done within the leased facilities of a meat-processing company, because Perdue had no machinery for making hot dogs. Poole had obtained an agreement with the Gwaltney Corporation of Smithfield, Virginia, that provided him with the use of Gwaltney's labor force and plant for a specified period each week. If demand exceeded this level, Perdue would then use the facilities of Briggs, Inc., of Maryland. Briggs had capacity for 300,000 pounds weekly. Bayshore, Inc., was already using Briggs' facilities to manufacture the Bayshore chicken hot dog.

Poole and Moriarty were concerned over control problems that might arise from possibly having to use two plants, neither belonging to Perdue. Poole found that the two plants produced hot dogs with slightly different colors and tastes, but he didn't know if consumers would be able to discern any difference once spices were added and the hot dogs were smoked. In fact, Poole thought that people would be unable to tell whether the hot dog was made from actual Perdue chicken once the meat was spiced and smoked. Poole was prepared to find a Perdue manager for the Briggs operation if the company started operations there.

In spite of these problems, Poole was encouraged by the successes competitors had had in introducing their chicken hot dogs. Longacre, a company with virtually no name awareness among consumers, was reportedly selling upwards of 100,000 pounds of hot dogs per week within six weeks of their introduction. Longacre spent much less on hot dog advertising than Perdue planned to spend and was also getting a price above that of beef hot dogs, even though "their hot dog was terrible," according to Poole. Longacre's sales were concentrated in upstate New York and Philadelphia. Weaver, another relatively unknown company, was selling a "fair amount" of chicken hot dogs, said Poole, with no advertising at all. Poole wondered how serious the production problems would be, especially if Perdue could achieve similar successes.

Marketing

Moriarty gathered information on the hot dog market through the company's advertising agency. The agency divided sales figures according to two market areas. The first included only the metropolitan areas where Perdue broilers were already distributed. The second comprised these areas and the peripheral areas outside them. Table 1 shows the estimated hot dog volume in these two categories.

Table 1

Estimated Volume, Metropolitan Areas
(000)

	Pounds	Dollars
1976	118,414	144,364
1977	124,334	151,554

Estimated Volume, Metropolitan Areas
and Periphery

	Pounds	Dollars
1976	140,137	170,433
1977	147,143	178,928

Moriarty also learned that the national hot dog market was composed of two segments, retail and institutional/concessionary. The advertising agency believed the national market was nearing $2 billion annually. Because of Perdue's strengths and experience in the retail sector, Moriarty thought it would be best for Perdue to remain in that segment with its hot dogs and ignore potential institutional/concessionary sales.

Within each geographical market were numerous competitors, most of them regional. (Exhibit 3 shows estimated total hot dog volume by geographical market.) One source showed that the largest share of the total Northeast market was held by Oscar Mayer with a 25 percent market share. The top 14 hot dog brands held 90 percent of the Northeast market, as shown in Exhibit 4.

Little advertising was done, most of it by regional spot television. Each market also had a significant number of lower priced, unadvertised brands. Industry observers believed that the hot dog market was quite price sensitive and that consumers showed little brand loyalty. For example, the brand to which consumers were most loyal, Hebrew National, had only a 50 percent brand-loyalty figure, and many of the brands had less than 30 percent brand loyalty (see Exhibit 4). Producers were also bothered by limited in-store space, for which there was strong competition. However, the fragmented nature of the industry also meant that no brand dominated more than one regional market.

Perdue executives segmented the hot dog market on the basis of an individual's annual consumption of hot dogs. They estimated that, within Perdue's market, 26 percent of the total households were heavy hot dog users, 33 percent medium hot dog users, 29 percent light users, and 12 percent nonusers. (Demographic characteristics of these segments are presented in Exhibit 5.)

Moriarty wondered if greater opportunities might exist in the light-user or nonuser segments, because he believed this group was probably less likely to buy on the basis of price and would be more influenced by chicken's nutritional advantages. (Chicken has less fat and more protein, pound for pound, than beef.) There also appeared to be a possible opportunity to increase primary demand by targeting light users and nonusers, who might have harbored some fears about the contents of hot dogs. These consumers especially would be influenced by the Perdue story of quality and nutrition. Moriarty estimated that Perdue's share of the hot dog market would be composed of new users of hot dogs as well as past light users of beef hot dogs.

Moriarty had talked to production and accounting people to estimate costs. He calculated that one package (one pound) of hot dogs would cost 58.2¢ to process and package, based on a volume of 100,000 pounds weekly. This figure included 16.6¢ for broiler meat, 7.5¢ for deboning, 23.0¢ to Gwaltney for processing,[3] 4.2¢ for freight, 3.9¢ for labor, 2.5¢ for cockrel processing, and 0.5¢ for packaging. In addition, Perdue would have to invest $225,210 in equipment, $32,500 per year in salaried employees, and $15,600 in maintenance.[4] Moriarty also noted that, as of the end of August, Perdue had spent $219,000 on hot dog research and development. General and administrative costs were estimated at 4 percent of sales. Distributors' margins were 5¢ per pound, regardless of selling price, and retailers commonly took margins of 35 percent. The company could, therefore, expect to net 75¢ per pound from a selling price of $1.23 per pound, after distributors and retailers took their respective cuts. Longacre's chicken hot dog was selling for $1.19 per pound at retail; Oscar Mayer's beef hot dog, for $1.45 per pound.

To calculate cash flows, Moriarty used three time periods. Months 1-6 included the test market, to be done in Providence, R.I. Moriarty hoped to get a 5 percent market share in the test, equaling 5,000 pounds per week. The second period, months 7-18, encompassed a move into Perdue's four largest markets: Boston/Providence, New York City, Philadelphia, and Baltimore. Again, Moriarty hoped to get 5 percent of the market. In the final period, months 19-30, Perdue planned to stay in the same four markets but wanted to increase share to 10 percent. Oscar Mayer, which was well established in Perdue's markets, had a market share of at least 10 percent in each market, and Moriarty wondered if it would be possible for Perdue to exceed this.

Since 1970, the Hygrade company had been introducing its beef hot dogs, Ball Park Franks, on a national market-by-market rollout. In 1975, Hygrade entered the New York City, Washington, D.C., Baltimore, and San Francisco markets with Ball Park and an estimated advertising budget of $2.5 million. A Hygrade spokesman said that, in markets where Ball Park Franks had been introduced, the company had obtained no less than a 10 percent share of the market and as much as a 25 percent share, which placed it first or second in these markets.

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[3] When and if Perdue had to use Briggs' facilities, this fee would increase to 28¢.

[4] When volume increased to 200,000 pounds weekly, investment in equipment would total $345,210; salaried employees payroll would total $45,000; and maintenance would total $20,800 per year.

The next question Moriarty faced was that of advertising and promotion. Perdue's advertising agency originally proposed a budget for advertising and promotion totaling $2.1 million. This budget included consumer and trade advertising, promotions, development of commercials, and a reserve. The total figure broke down into $304,150 for the 6 months in the Providence market and $1,814,000 for the months in the four-city market, but management executives, who thought that the budget was uncomfortably high, proposed an alternative budget totaling $189,000 for the test market and $1,205,000 for the four-city market. Regardless of what dollar advertising level was set, however, Moriarty was still uncertain how to position the Perdue frank with the advertising. He could not decide whether the chicken hot dog should be promoted as something new or as something to compete with conventional meat hot dogs.

Poole was encouraged by the comments of some of Perdue's distributors: while on tour of a Perdue plant, several distributors, not knowing that the company was already doing so, suggested to a company official that Perdue develop a line of chicken hot dogs. The distributors were confident a Perdue hot dog would be a big seller.

Nutrition

Poole and others were very concerned about possible damage to Perdue's quality-chicken image. Hot dog manufacturers had first come under fire in 1972 because of alleged nutritional shortcomings in their products. During that year, Consumers Union, publishers of *Consumer Reports* magazine, tested popular hot dog brands in their laboratories and found that their contents included an average 28 percent fat, only 11.7 percent protein, and various extras. The article concluded:

> So it looks as though consumers are paying today's elevated prices for franks that are only 60 percent as nutritious as they were in the Depression. Besides the extra fat, modern consumers are getting an unpleasant bonus—a dismally high bacteria count, judging by most of the samples we tested for wholesomeness.[5]

Consumer Reports added that two hot dogs contained 460 calories but only 10 grams of protein. A comparable weight of poultry had 26 grams of protein; fresh or frozen fish had 25 grams; lean beef, veal, lamb, or pork had 24 grams; and canned tuna had 17 grams. Regarding the bacteria problem, the article warned consumers to cook hot dogs to an internal temperature of 160° to kill most of the microorganisms. Boiling for 5 minutes or grilling for 20 minutes at

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[5] *Consumer Reports*, February 1972.

375° would bring the hot dogs up to this temperature. None of the test hot dogs were made from chicken.

Later in 1972, *Time* and *Life* magazines also printed articles critical of hot dog quality. By the end of 1972, annual growth in hot dog sales had dropped to 1 percent, down from the 1971 growth rate of 9 percent. A spokesperson for Oscar Mayer said that the decline was because of bad publicity. However, the American Meat Institute said that the decline was primarily a result of increasing prices for hot dogs.

Perdue's management was concerned that consumers still commonly held this negative image in 1976. Moreover, the use of MDM in hot dog manufacture had the potential of further sullying this image. MDM was receiving an increasing amount of unfavorable publicity in the press and in regulatory agencies of the federal government.

Mechanically Deboned Meat

Mechanical deboning of meat retrieved small bits of meat left on a carcass after retail cuts were removed by traditional hand methods. MDM was retrieved by crushing bones that had attached fragments of meat and straining the crushed material to remove most of the bone. The strained material contained mostly meat, with a bone-powder residue that could not be tasted or felt.

MDM had been in use in the fish and poultry industries in the United States since 1968, with an estimated annual production of 150 million pounds. In the mid-1970s, producers of red-meat products began to use MDM for such products as bologna, pizza, canned meat balls, and frankfurters. MDM could not be used in such fresh-meat products as hamburger. The attraction of MDM was its price. One producer said, "You're talking about a pretty cheap, edible product that would sell for 18 or 19¢ per pound. That would replace meat going into sausage production that sells for four times that much." Government and industry calculations showed that MDM could add a billion pounds per year to the United States' food supply.

However, consumer groups and nutritionists were pressuring the USDA to reverse its April 1976 policy allowing red-meat processors to continue sale of products containing MDM. Critics charged that MDM products were potentially harmful because they contained finely pulverized bone. Such bone particles might cause allergic reactions, intestinal problems, or dietary complications in individuals who were on low-calcium diets. Consumer groups also claimed that bone particles were a contaminant, that end products containing MDM should be labeled as such, and that the USDA should establish microbiological standards for MDM, because the process generated heat.

In April 1976, the USDA issued standards for processing and using mechanically deboned red meat. Industry interpreted the standards as an official blessing of MDM, and its use spread. The USDA also ruled that bone particles were not a contaminant in meat products. The USDA's apparently favorable attitude toward MDM pleased industry but irked some consumer groups.

Although MDM had been used in U.S. fish and poultry markets since 1968, some European producers had been using MDM as early as 1964, and MDM chicken had been in some Japanese products since the late 1950s. One defender of MDM said in a trade-publication article that MDM contained twice the iron of manually deboned meat because of the presence of bone marrow in MDM. He also acknowledged that MDM contained more calcium than regular meat did, but pointed out that one pound of cheese contained six times the calcium of one pound of MDM. The possibility of nonfood fragments in food had long been accepted in pitting cherries, olives, peaches, and dates—all processes that used mechanical deboning equipment.[6]

MDM versus Quality

Moriarty was concerned about the use of MDM in the Perdue frank. Mechanical deboning would be used to retrieve the broiler meat from broiler backs and ribs, which composed 85 percent of the Perdue frank. Although government regulations allowed up to 1 percent calcium in red-meat MDM products, Poole had reduced the calcium level in the test-marketed hot dog to 1/10 of 1 percent. The proposed retail price for the Perdue frank was slightly above the market average, and inclusion of an inexpensive ingredient such as MDM might hurt the company's ability to obtain a premium price. Moriarty was also concerned that the MDM controversy might force Perdue to state "contains mechanically deboned meat" on the label or ultimately to reformulate the product with more expensive meat. Moriarty worried, therefore, that the image of MDM would contradict the proposed image of nutrition and superior quality for the Perdue frank.

Finally, Moriarty feared that an MDM hot dog would endanger the quality image that was an integral part of Perdue's broiler marketing strategy. In one advertisement, Frank Perdue reflected on his emphasis on quality and natural ingredients as follows:

> When people ask me about my chickens, two questions invariably come up. The first is, "Perdue, your chickens have such a great golden-yellow color it's almost unnatural. Do you dye them?" Honestly, there's absolutely nothing artificial about the color of my chickens. If you had a chicken and fed it good yellow corn, alfalfa, corn gluten, and marigold petals, it would just naturally be yellow. You can't go around dyeing chickens. They wouldn't stand for it.
>
> The other question is, "Perdue, your chickens are so plump and juicy, do you give them hormone injections?" This one really gets my hackles up. I do nothing of the kind. When chickens eat and live as well as mine do, you don't have to resort to artificial techniques.

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[6] *Quick Frozen Foods,* November 1976.

Exhibit 1

PERDUE FARMS, INCORPORATED

Perdue, Inc., Sales and Assets, 1965-76
(000)

	Sales	Total Assets
1965	$ 31,624	NA
1966	35,558	NA
1967	37,956	NA
1968	38,096	NA
1969	47,507	NA
1970	56,670	$ 27,028
1971	63,031	40,923
1972	77,021	38,917
1973	88,592	51,572
1974	142,743	66,224
1975	179,196	99,998
1976	$206,096	$133,441

Note: NA means not available.

Exhibit 2

PERDUE FARMS, INCORPORATED

Food Products Introduced by 138 Companies in Five Years, 1971-76

Food Category	Total Food Items or Units	Degrees of Required Preparation[1] Requires Cooking	Heat and Serve, Mix and Serve	Table Ready, Thaw and Serve
Hors d'oeuvres	192	22%	69%	9%
Salads	77	7	0	94
Entrees	2,037	32	68	1
Side dishes	300	20	70	10
Dinners	271	22	58	20
Breads and rolls	136	21	24	54
Cakes and pastries	376	23	19	57
Dessert pies	193	45	24	31
Snacks	108	4	14	82
Sauces and gravies	188	25	63	12
Condiments	157	6	1	94
Bases and mixes	254	30	64	6
Soups	108	35	63	2
All others	902	38	40	22
Total	5,229	29%	52%	20%

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[1] Percentages may not add to 100 because of rounding.

Source: *Broiler Industry*, November 1976.

Exhibit 3

PERDUE FARMS, INCORPORATED

Hot Dog Volume by Market
(000)

	1975 Actual	Estimated 1976	Estimated 1977
Boston/Providence			
Pounds	21,915	23,011	24,162
Dollars	26,517	27,842	29,234
New York			
Pounds	42,923	45,069	47,327
Dollars	55,143	57,900	60,795
Philadelphia			
Pounds	36,652	38,485	40,409
Dollars	42,150	44,258	46,471
Baltimore			
Pounds	11,285	11,849	12,441
Dollars	13,654	14,337	15,054
Periphery[1]			
Pounds	20,698	21,723	22,809
Dollars	24,828	26,069	27,374
Totals			
Pounds	132,286	140,137	147,143
Dollars	160,688	170,433	178,928

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[1] Includes New Haven-Hartford, Springfield-Holyoke, Albany-Schenectady-Troy, Harrisburg-Lancaster, Wilkes Barre-Scranton, Portland.

Exhibit 4

PERDUE FARMS, INCORPORATED

1975 Hot-Dog-Brand Market Shares and Brand Loyalty

Brand	Market Share	Brand Loyalty[1]
Oscar Mayer	25%	40%
Swifts Premium	12	24
Armour Star	11	29
Hormel	6	27
Ball Park	6	35
A&P	4	35
Eckrich	4	30
Wilson Certified	4	22
Morrell	3	19
Safeway	3	31
Farmer John	3	33
Hygrade	3	27
Hebrew National	2	50
Cudahy	2	24
Kahns	2	29
Other brands	10	—
Total	100%	—

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[1] Brand loyalty is determined by dividing number of sole users by number of total users.

Exhibit 5

PERDUE FARMS, INCORPORATED

Demographic Characteristics of Hot Dog User Segments

Heavy users (once a week or more)	26%
Medium users (two or three times a month)	33%
Light users (once a month or less)	29%
Nonusers	12%

	Homemaker Age			
	18-24	25-34	35-49	50 and Over
Heavy	25%	36%	31%	19%
Medium	33	31	30	28
Light	23	22	29	35
Nonuser	19	11	10	18
	100%	100%	100%	100%

	Household Income		
	$10K or Less	$10K-$20K	$20K or More
Heavy	25%	30%	26%
Medium	35	28	28
Light	24	28	35
Nonuser	16	14	11
	100%	100%	100%

	Household Size		
	1 or 2	3 or 4	5 or More
Heavy	16%	30%	39%
Medium	22	32	32
Light	36	26	19
Nonuser	26	12	10
	100%	100%	100%

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4

MEM Company, Inc.

Assistant Professor John A. Quelch wrote this case as the basis for class discussion rather than to illustrate effective or ineffective handling of an administrative situation. Certain company data have been disguised.

In December 1980, Gay Mayer, president of MEM Company, Inc., was considering how to increase sales of the company's line of men's toiletries, which included the English Leather brand.[1] Sales had risen 10% in 1979 over the previous year but had flattened in 1980. Several options to improve sales growth existed, but the two that interested Mayer the most were expansion of distribution into food stores and introduction of a new brand.

Company Background

In 1883 Mark Edward Mayer opened a first-class women's perfume and soap store in Vienna. Exports to the United States began in 1920. Sales were so strong that the company moved to the United States in 1935. It began to shift emphasis to men's fragrances after one of its department store accounts accidentally displayed MEM cologne for women in the men's department, where it rapidly sold out. The company developed a more masculine-looking package, changed the fragrance formula slightly, and introduced a men's cologne under the generic name *Russian Leather*. In 1947 the name was changed to English Leather in response to the Cold War and a Fifth Avenue buyer's desire to merchandise MEM products in conjunction with high-quality English clothing.

Sales growth accelerated after the company went public in 1966, approaching $60 million in 1979. Approximately one-third of these sales were derived from two subsidiaries, Tom Fields Ltd. (which manufactured the Tinkerbell line of children's toiletries) and Lebanon Packaging Company, acquired in 1969. Sixty percent of MEM

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[1] Blondit, English Leather, Timberline, Tinkerbell, and Wind Drift were registered trademarks of MEM Company, Inc.

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Table A MEM's Toiletries for Men

	Face Savers	*Headliners*	*Body Guards*	*Gift Sets*	*Total*
English Leather	20	3	11	19	53
Lime	3	0	2	4	9
Musk	7	0	2	3	12
Timberline	5	0	2	4	11
Wind Drift	5	0	2	4	11
Racquet Club	6	0	3	5	14
Total	46	3	22	39	110

sales were accounted for by six lines of men's toiletries: English Leather (introduced in 1947); Lime (1968); Timberline (1970); Wind Drift (1972); Musk (1975); and Racquet Club (1978). Lime and Musk had been developed in response to similar competitive fragrances. Timberline and Wind Drift appealed to men who enjoyed the outdoors and the sea; Racquet Club had been introduced to capitalize on the growing popularity of tennis and other racquet sports.

All six lines carried the English Leather name on product labels, and all were sold in similar packages. They covered three broad product categories: (1) face savers, including all-purpose lotion, after-shave, and shaving cream; (2) headliners, including shampoo and hair tonic; and (3) body guards, including cologne, deodorants, bath soaps, and talc. A breakdown of MEM men's toiletries by line and product category is shown in *Table A*.

During 1979, 39% of English Leather dollar sales were in face savers, 1% in headliners, and 14% in body guards. Of the remainder, 37% were accounted for by gift sets and 9% by mixed prepacks.[2] The breakdown was similar for the other five lines, except that gift sets accounted for, on average, only 20% of sales. Although individual slow-selling items were sometimes dropped, MEM had never discontinued an entire line.

The MEM company distributed under license the expensive John Weitz designer and Acqua di Selva lines of men's toiletries to about 1,000 department store and men's specialty store accounts. It also sold the Embracing line of lower-priced women's spray and splash colognes, Blondit creme bleach for facial and body hair, and a variety of novelty and boutique soaps. In aggregate these products accounted for 5% of MEM sales in 1979.

Production Process

After-shaves and colognes are fragrances blended with varying quantities of other raw materials, principally water and alcohol. After-shaves contain more water, less alcohol, and less fragrance than colognes. Once packaged, both remain chemically stable unless exposed to heat or light. When applied to the skin, evaporation releases the fragrance. It is important to insure that the ingredients evaporate simultaneously and that the chemistry of the reaction is constant among consumers despite differences in body metabolisms.

Like its major competitors, MEM did not develop or manufacture most of the fragrances in its toiletries; these were supplied by about 30 international companies including Roure-Dupont, Givaudan, and International Flavors and Fragrances. Development of a fragrance involved skilled compounding by specialist chemists of as many as 50 raw materials, both natural and synthetic. Fragrance formulas were not usually divulged, in order to insure the loyalty of buyers to their original suppliers.

Typically MEM would invite about six manufacturers to submit fragrance samples on a speculative basis. The company would specify a price range and target consumer group. Samples would be evaluated on a range of attitudinal dimensions by MEM employees, after which one or two would be chosen for testing in selected markets. Such research often proved inconclusive, so the judgment of senior management was usually paramount in the final selection of new fragrances.

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[2] A mixed prepack was a set of merchandise sold to the trade, sometimes at a discount, which included items from several MEM lines.

The MEM company subcontracted manufacture of its shaving creams and some deodorant sticks. It compounded and packaged most of its products at its 205,000-square-foot Northvale, New Jersey, plant. Production efficiency was limited by the breadth of the product line, frequent need for short production runs, and seasonality of sales. Packaging, particularly of gift sets, remained labor intensive and largely unautomated. And although floor space was not fully utilized, much had to be devoted to storing over 200 lots of individual plastic, wood, paper, and glass packages and containers.

The Men's Toiletries Market

Data on the men's toiletries market were sparse, partly because of the fragmentation of the industry, partly because substantial male use of products targeted at women was believed to occur. Some 60 companies and 200 brands competed for consumer purchases of men's cologne and after-shave. Retail sales of those products through all classes of trade during 1979 were estimated at $224 million and $189 million respectively, up 10% and 4% over 1978 and six times greater than in 1965 (see *Exhibit 1*). Retail sales of men's deodorants, shaving creams, and hairdressings were estimated at $330 million, $135 million, and $150 million, respectively.

Mayer divided the men's toiletries market into three groups, based on price point. (See *Exhibit 2*.) The *exclusive* group included designer-name brands, such as Pierre Cardin and Oleg Cassini, with retail selling prices over $10 for a 4-ounce bottle of cologne. These were distributed primarily through department stores and men's specialty stores and were advertised in men's, women's, and dual-audience magazines.

The MEM products competed principally in the *medium-priced* group, in which a 4-ounce bottle of cologne typically sold for between $4 and $10. English Leather's principal competitors were Old Spice, manufactured by the Shulton division of American Cyanamid; British Sterling, manufactured by the Spiedel division of Textron; Jovan, manufactured by Beecham, a major British pharmaceutical company; and Brut, manufactured by Fabergé, a public company with annual sales estimated at $250 million. Next to Old Spice, MEM had the broadest product line among these competitors. Mayer believed that English Leather users were typically somewhat younger than users of either British Sterling or Old Spice.

The third, *mass* group of brands, selling below $4, included Aqua Velva (manufactured by J. B. Williams Co.), Mennen Skin Bracer, and Brut 33. These brands were also thought to appeal to an older age group than English Leather. They were distributed primarily through food stores, drugstores, and mass merchandisers and discount stores such as K Mart.

Several trends were evident in the market during the late 1970s. Many independent manufacturers were acquired by large corporations attracted by their high profit margins. Further, many manufacturers were active in more than one segment. Shulton marketed both the Old Spice and the exclusive Pierre Cardin brands. Fabergé marketed Brut in the medium-priced segment and Brut 33 in the mass segment. Mennen marketed Mennen Skin Bracer in the mass segment and had recently introduced Millionaire in the medium-priced segment.

Many new products were introduced during the late 1970s. In the exclusive market segment, new brands with designer names were frequently launched, partly because national distribution and heavy advertising were not considered essential to success. More surprising to MEM executives was the number of new products in the medium-priced segment backed by substantial advertising expenditures. In 1979, for example, the Ralph Lauren division of Warner Communications introduced Chaps, Jovan introduced Oleg Cassini, and Lever Bros. introduced Denim. Combined advertising expenditures on these three brands approached $7 million in 1979.

Media advertising expenditures on men's after-shave and cologne in 1979 totaled $45 million, of which 80% was spent on television and 18% in consumer magazines. These represented a 30% increase over 1978, although media costs had increased only 15%. The top 12 brands accounted for 62% of expenditures in 1979, up from 52% in 1978. Shulton spent 50% more to advertise Old Spice than MEM spent on all six of its lines in 1979. In 1980 it appeared that English Leather would be outspent by Brut as well, as MEM's share of industry advertising declined. A consumer survey showed English Leather ranking second only to Brut in unaided advertising awareness (see *Exhibit 3*).

Sales and Distribution

MEM men's toiletries were distributed through a variety of channels representing about 24,000 retail outlets (see *Exhibit 4*). The percentages of sales by line and class of trade for 1979 and 1980 are reported in *Exhibit 5*. Although MEM's distribution penetration was less than that achieved by Old Spice, company executives believed that their current general merchandise, mass merchandise, and drug accounts were responsible for at least 80% of men's fragrance sales through these classes of trade. All shipments were made direct to retail stores or to the regional warehouses of retail chains. Wholesalers were not significantly involved in MEM's distribution.

In 1960 MEM products had been distributed primarily through department stores and men's specialty stores. However, changes in consumer shopping patterns, the broadening popularity of MEM products, and the substantial merchandising support required by department stores caused the company to expand distribution. By 1980 English Leather was the highest-selling line of men's toiletries carried by general merchandise chains such as Sears, Roebuck & Co. and J. C. Penney. Nevertheless, as indicated in *Exhibit 6*, English Leather placed second to Old Spice in dollar market share in drugstores and mass merchandise outlets. Distribution through food stores accounted for less than 2% of sales in 1980; however, MEM executives were receiving an increasing number of inquiries from food chains about carrying a limited selection of their faster-moving items.

The company's accounts were classified by sales revenue potential. Frequency of calls by MEM salespeople varied accordingly. Buyers at important headquarters accounts of major chains would be visited six times a year. Several thousand accounts bought in quantities too small to justify any sales call and were serviced through the mail. The MEM sales force of 50 was one of the largest in the industry. Each salesperson was responsible for all accounts in a geographic territory. Some salespeople were required not to call on the outlets of certain national accounts located in their territories. (For example, K Mart allowed no supplier salespeople in its retail stores.) Because the sales force was able to visit and provide merchandising assistance to 14,000 retail outlets three times a year on average, MEM had achieved better distribution penetration than most of its competitors, particularly in independent drugstores.

The average salesperson compensation package of over $30,000 included 70% salary and 30% commission. (Most manufacturers of men's toiletries did not offer such a high commission component but, unlike MEM, they typically reimbursed expenses.) Partly as a result, MEM's sales force turnover was low and MEM salespeople were considered above the industry average in both quality and experience. They had to be versatile to sell in several classes of trade, which differed widely in merchandising objectives and practices.

Retail sales were concentrated around the Father's Day, graduation, and Christmas gift-giving periods. Over 40% of annual retail sales of MEM men's toiletries occurred during November and December, and three-quarters of these were believed to be gift purchases. Because of this seasonality, MEM commonly held a cash surplus during the first half of each year, but had to borrow during the second half to finance its dating program. Under this program, the trade was not required to pay invoices on midyear orders for Christmas shipments until year-end. A sliding scale of discounts for prepayment of invoices before the dating deadline was also offered.

Pricing Policy

Products were shipped by MEM with freight prepaid and typically allowed the trade a 40% margin. Suggested retail prices were maintained in most outlets. Rapid increases in the cost of raw materials for fragrance compounding and packaging caused retail prices of men's toiletries to rise dramatically during the 1970s, and the industry became concerned that competitiveness of their products in the gift marketplace might be jeopardized. The MEM company had not raised its prices as fast as the industry, and, partly as a result, its line had become increasingly acceptable to more price-oriented classes of trade.

An income statement outlining the cost structure for MEM men's toiletries is presented in *Exhibit 7*. The contribution margin varied widely item by item; it was highest on colognes packaged in plastic containers. (Executives believed that the significant cost difference between glass and plastic packaging would not be credible to consumers if fully reflected in a retail price differential.) Margins were lower on more frequently used products, including aftershaves, deodorants, and shaving creams, and also on gift sets. Gift sets were priced as the sum of the prices of the component items, but because of incremental packaging and labor costs their percentage margins were lower than the average on the component items.

The MEM company sometimes offered its products to the trade at promotional prices. During 1980 about 10% of its men's toiletries were sold at prices that allowed 45% or 50% margins as opposed to the usual 40%. Trade interest was maintained through frequent prepacks shipped with counter or shelf display units and through gift-with-purchase, purchase-with-purchase, and self-liquidating premium consumer promotions.[3]

Less-expensive brands of men's toiletries typically offered more price-oriented consumer promotions, such as coupons and refunds. Promotions for MEM men's toiletries during 1980 are summarized in *Exhibit 8*. A merchandising tear sheet for one of these promotions is reproduced in *Figure A*.

Marketing Communications

As indicated in *Exhibit 9*, 20% of MEM men's toiletries sales dollars were spent on marketing communications, principally advertising and promotion. The vice president of finance hoped to maintain this ratio in 1981 even if the company introduced a new line.

Advertising for MEM men's toiletries was aimed at males and females, aged 18 to 34, in households with annual incomes over $10,000. Men in this age group were believed to be the heaviest users of men's toiletries and the most likely to switch brands. Since 1967 MEM had employed the theme "All my men wear English Leather, or they wear nothing at all." Some MEM executives believed this theme was becoming "tired," and "a less provocative approach might be better suited for the 1980s." Slogans used by competitive brands tended to emphasize either a macho or a success theme. (See *Exhibit 10*.)

Measured media advertising expenditures, summarized in *Exhibit 11*, emphasized national television and consumer magazines with support from network radio. Some MEM executives believed that the budget should be concentrated entirely in television. Advertising on television was devoted exclusively to English Leather and was aired primarily during prime time, late fringe, and late night.[4] Magazine advertising in 1980 covered all six lines of MEM men's toiletries and was placed primarily during June and the fourth quarter in a diverse group of 25 magazines such as *People*, *Playboy*, and *Cosmopolitan*. Radio was used as a supportive medium immediately before the Christmas holiday; it afforded scheduling and copy flexibility and added to the frequency with which the advertising message was delivered. About 20% of advertisements in all media promoted gift sets.

In addition to national advertising, there were three other major areas of expenditure in the MEM communications budget. First, the company offered the trade a cooperative advertising program under which it contributed toward the cost of store advertisements that prominently featured MEM merchandise (contribution was up to 5% of the value of store purchases from MEM). Second, MEM was a prominent and frequent sponsor, under the English Leather name, of championship sports events in tennis, skiing, and auto racing. The company also jointly promoted local events with retailers who carried MEM merchandise. Finally, MEM, like other manufacturers of men's toiletries, made substantial use of both free samples to be distributed by sales clerks, and testers to be used by customers at the point of purchase.

Sales Growth

Mayer and other MEM executives believed that periodic new product introductions were essential in the men's toiletries market to maintain consumer and trade interest and to sustain sales growth. It had been over two years since Racquet Club had been introduced.

A new brand, tentatively named Cambridge,[5]

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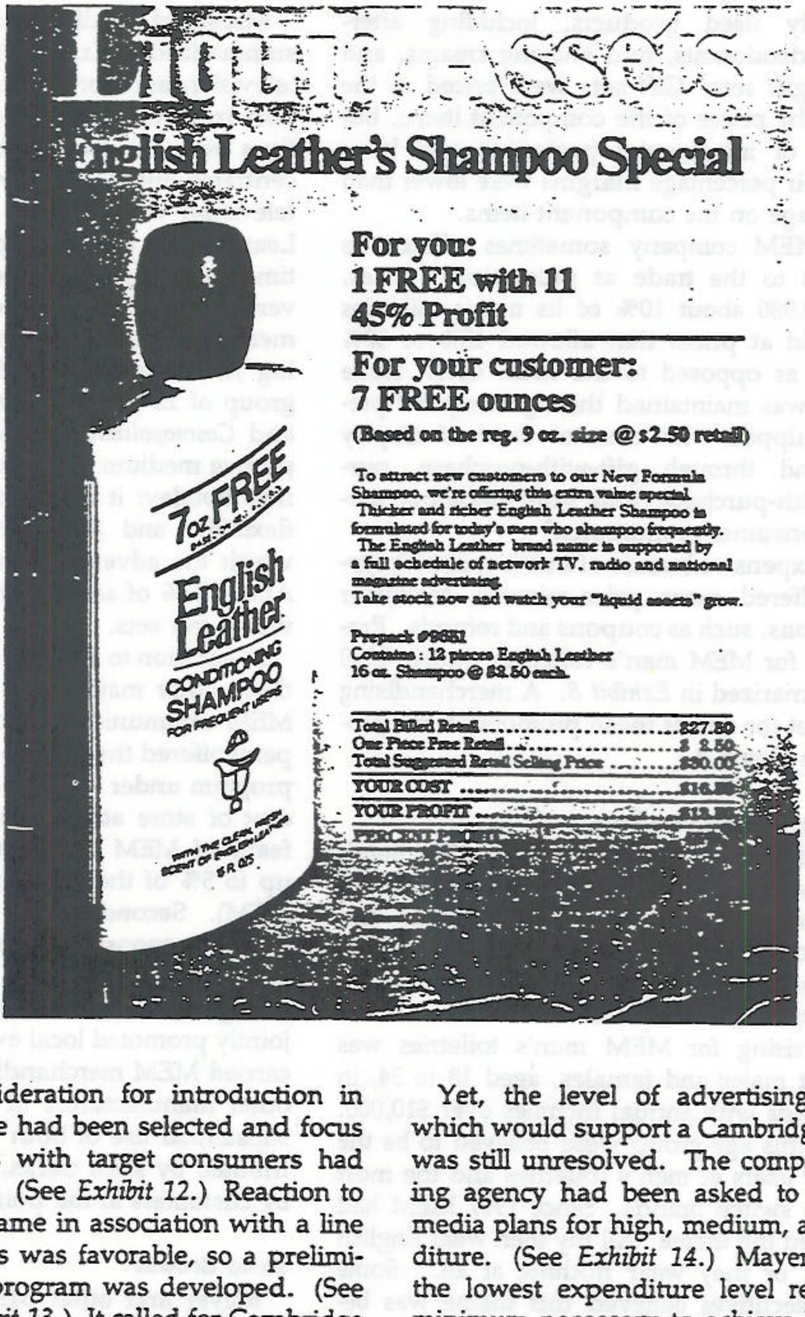
[3] Gift-with-purchase (GWP) and purchase-with-purchase (PWP) promotions offered consumers either a free gift or a second item at a discounted price as incentives to purchase the promoted product at the regular price. A self-liquidating premium was an item offered at a price substantially below normal retail (usually 30% to 50% lower) in return for one or more proofs of purchase from the sponsoring manufacturer's products.

[4] Prime time is divided into early prime (7:30–9:00 P.M.) and late prime (9:00–11:00 P.M.); late fringe is 11:00–11:30 P.M. and late night, 11:30 P.M.–1:00 A.M.

[5] The MEM company had acquired a trademark on the name *Cambridge* for toiletries. The Philip Morris Co. held a similar trademark for cigarettes and had recently spent $4 million launching its low-tar Cambridge brand.

Figure A Merchandising Tear Sheet for 1980 Promotion


7oz FREE
English Leather
CONDITIONING SHAMPOO FOR FREQUENT USE
WITH THE CLEAN, FRESH SCENT OF ENGLISH LEATHER

English Leather's Shampoo Special

For you:
1 FREE with 11
45% Profit

For your customer:
7 FREE ounces
(Based on the reg. 9 oz. size @ $2.50 retail)

To attract new customers to our New Formula Shampoo, we're offering this extra value special.
Thicker and richer English Leather Shampoo is formulated for today's men who shampoo frequently.
The English Leather brand name is supported by a full schedule of network TV, radio and national magazine advertising.
Take stock now and watch your "liquid assets" grow.

Prepack #9651
Contains: 12 pieces English Leather
16 oz. Shampoo @ $2.50 each.

Total Billed Retail	$27.50
One Piece Free Retail	$ 2.50
Total Suggested Retail Selling Price	$30.00
YOUR COST	$16.[illegible]
YOUR PROFIT	$13.[illegible]
PERCENT PROFIT	[illegible]

was under consideration for introduction in 1981. A fragrance had been selected and focus group interviews with target consumers had been conducted.[6] (See *Exhibit 12.*) Reaction to the Cambridge name in association with a line of men's toiletries was favorable, so a preliminary marketing program was developed. (See summary in *Exhibit 13.*) It called for Cambridge to be targeted at men aged 18 to 34 and to sell at $10 retail for a 4-ounce bottle of cologne. Mayer believed Cambridge would gain sales primarily at the expense of British Sterling and other brands in the $7 to $10 range.

Yet, the level of advertising expenditures which would support a Cambridge introduction was still unresolved. The company's advertising agency had been asked to develop three media plans for high, medium, and low expenditure. (See *Exhibit 14.*) Mayer believed that the lowest expenditure level represented the minimum necessary to achieve his 1981 target of $3 million in factory sales.

Not all MEM executives were enthusiastic about the Cambridge program. Some argued that even the lowest of the media budgets was unaffordable and that the level of advertising needed to launch the new brand could be greatly reduced if the well-known English Leather name was included both on the package and in the advertising. These executives wished to call the brand "Cambridge by English Leather."

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[6] In a focus group, a trained interviewer typically spends one to two hours with 6 to 10 consumers probing product and brand meanings or seeking reactions to specific new product or advertising concepts.

Others believed that the potential of Racquet Club had not yet been exhausted and that another new product in the medium-price range would be wasteful. They pointed out that Racquet Club's initial sales were made largely at the expense of Lime, Musk, Timberline, and Wind Drift, because many retailers, especially chain drug buyers, had not been willing to provide additional shelf facings for MEM products.

Some of those who favored a product launch believed that MEM should give first priority to a low-priced brand to penetrate food stores. Although food stores had long carried men's toiletries, MEM had been reluctant to sell through this channel. The men's toiletries sections in many food stores had traditionally been serviced by rack jobbers.[7] The MEM company preferred to sell only direct to retail accounts to maintain consistent product margins. During the 1970s, however, many major food chains merged with or established their own drugstore chains. (For example, Medi Mart drugstores and Stop & Shop supermarkets were owned by the same company.) As a result, their direct buying from men's toiletries manufacturers increased. Mayer knew that food chains typically stocked only the high-turnover items in a product line and that they pressed for frequent trade deals and year-round national television advertising. He wondered, however, whether the MEM sales force should now attempt to sell to the major food chains, particularly those that emphasized assortment and service rather than low prices. If he proceeded in this direction Mayer wondered which, if any, items in the six existing lines should be offered to the food chains or whether a new brand would be more acceptable.

Conclusion

On December 20, 1980, Mayer learned that Shulton was planning to launch its first new brand of men's toiletries since the introduction of Old Spice in 1936. Under the brand name Blue Stratos, an after-shave and cologne would be available for shipment to the trade in March 1981, to be followed by a bath soap, stick deodorant, shave cream, and body talc. The 4-ounce bottle of cologne would carry a suggested retail price of around $10. The trade press reported that advertising would feature the slogan "Unleash the spirit" and use a hang-gliding motif to symbolize the freedom and adventure of the sky. Shulton announced that the Blue Stratos national rollout would be supported by a $12 million communications budget. In addition to network television and full-page advertisements in *Playboy*, *People*, and *Sports Illustrated*, Shulton planned to mail 10.3 million samples of three-pack product wipes to reach one-third of all men aged 18 to 34. Recognizing that Blue Stratos was targeted at the same market as Cambridge, Mayer wondered whether he should cancel or delay the Cambridge introduction and commit his entire 1981 communications budget to reinforcing the six existing lines.

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[7] Rack jobbers are compensated on a percentage margin basis for stocking the shelves in retail outlets. They do not take title to the merchandise they handle.

Exhibit 1 Men's Toiletries for Three Classes of Trade, 1979 (dollars and unit sales in millions)

	Retail Dollar Sales				*Unit Sales*	
	After-shave	*Cologne*	*Total*	*% Increase over 1978*	*Total*	*% Increase over 1978*
Chain and independent drugstores	$ 78	$ 71	$149	15%	43	5%
Mass merchandisers and discount stores	38	26	64	15	23	5
Food stores	29	4	33	10	16	0
	$145	$101	$246	13%	82	3%

Source: Rosenfeld, Sirowitz & Lawson, Inc.
Note: Data for department stores and men's specialty stores were not available in this study.

Exhibit 2 Retail Price Points for MEM Men's Toiletries and Competitive Brands, July 1980

	After-shave 2 oz.	*Cologne 2 oz.*	*After-shave 4 oz.*	*Cologne 4 oz.*	*After-shave 8 oz.*	*Cologne 8 oz.*
English Leather	$2.50	$3.00	$4.00	$6.00	$5.50	$8.00
Lime	2.50	3.00	3.50	5.50	5.00	7.50
Musk	3.00	3.50		6.00		
Timberline	2.50	3.00	3.50	5.50	5.00	7.50
Wind Drift	2.50	3.00	3.50	5.50	5.00	7.50
Racquet Club	3.00	4.50	5.00	6.50		
Acqua di Selva	7.50 (1.75)	8.40 (1.75)	11.00 (3.50)	13.50 (3.50)		21.00 (7.00)
Aramis		8.50	9.00	12.50	15.00	22.00
British Sterling	3.50	4.00	7.00	7.00	7.50	9.50
Brut		4.50 (1.50)		9.00 (3.20)		15.00 (6.40)
Brut 33			2.50 (3.50)	2.50 (3.50)		4.15 (6.00)
Brut 33 Musk				4.15 (3.50)		
Cardin	6.00	8.00	8.50	12.50	15.00	22.50
Chaps		6.50	8.50	9.50	12.50	14.50
Denim	3.00		5.00	7.50		
Monsieur Jovan		3.50	7.00	7.50	10.50	11.00
Old Spice			3.00 (4.25)	4.50 (4.25)	4.75 (8.50)	6.50 (8.50)
Oleg Cassini		7.00		11.50		

Source: Company records
Note: Numbers in parentheses indicate different ounce-size package from that shown in column heading.

Exhibit 3 Results of 1980 Consumer Survey (percent of respondents)

	Brand Awareness[a]		*Advertising Awareness*		*Correct Slogan Identification*	*Brands Ever Used*	*Brands Now Used*	*Brand Used Most Often*
	Unaided	*Total*	*Unaided*	*Total*				
Aqua Velva	13%	94%	2%	86%	na	4%	na	na
Aramis	40	83	3	52	9%	28	22%	22%
British Sterling	na	na	na	na	na	4	4	na
Brut	52	96	28	84	80	24	8	6
Canoe	na	na	na	na	na	22	14	10
Denim	9	62	4	57	21	4	2	na
English Leather	41	96	27	85	45	30	12	4
Jovan	12	72	6	68	na	8	4	4
Mennen Skin Bracer	19	88	1	77	na	16	12	8
Old Spice	48	93	24	83	74%	30	20	20
Pierre Cardin	na	na	na	na	na	6	4	na
Royal Copenhagen	15%	50%	4%	43%	na	10%	8%	6%

Source: Rosenfeld, Sirowitz & Lawson, Inc.

Note: Percent of respondents is based on telephone interviews with men and women purchasers of men's cologne and after-shave conducted in New York and Chicago during December 1980.

a. To qualify as having unaided awareness of a brand or its advertising, a consumer had to name it in response to questions such as "What brands of men's after-shave or cologne can you name?" and "What brands of men's after-shave or cologne have you seen advertised?" Total awareness measures also included consumers with aided awareness who replied affirmatively to questions such as "Have you heard of brand X?" or "Have you seen advertising for brand X?" Correct slogan identification required a consumer to name the associated brand correctly when presented with a particular slogan.

Exhibit 4 Account Penetration by Class of Trade, 1980

	Number of Headquarters Accounts Sold	*Number of Retail Outlets Penetrated*	*Estimated Total Number of Retail Outlets*
Department stores	17	900	3,000
General merchandise chains[a]	12	3,600	4,000
Chain drugstores[b]	56	6,000	9,500
Independent drugstores	na	6,500	40,000
Mail-order catalogs	8	50	
Mass merchandisers and discount stores[c]	35	6,000	10,000
Armed forces stores	na	700	
Men's specialty stores and other stores[d]	na	1,000	
Export	na	na	na

Source: Company records

a. Includes Sears, Roebuck & Co., J.C. Penney Co., and Montgomery Ward.

b. Includes drug accounts with more than five retail outlets, such as Osco Drug and Medi Mart.

c. Includes Woolco-Woolworth, K Mart, Zayre, and Service Merchandise.

d. Includes college bookstores, gift shops, food stores, and so on.

Exhibit 5 Percentages of Dollar Sales by Product Line and Class of Trade, 1979 and 1980

		English Leather	*Lime*	*Musk*	*Timber-line*	*Wind Drift*	*Racquet Club*	*Mixed Prepacks*	*Other*	*Total*[c]
Department stores	1979	2.6%[a]	0.1%	0.3%	0.1	0.2	0.3	0.3	[b]	3.9
	1980	2.0	0.1	0.2	0.1	0.1	0.2	0.1	[b]	2.8
General merchandise chains	1979	8.2	0.3	1.1	0.5	0.5	1.1	1.0	0.1	12.8
	1980	7.4	0.2	1.1	0.4	0.4	1.1	1.0	0.1	11.7
Chain drugstores	1979	21.3	1.0	3.2	1.6	1.1	2.0	2.9	0.1	33.2
	1980	22.5	1.0	3.4	1.5	1.1	1.4	2.7	0.1	33.7
Independent drugstores	1979	5.3	0.3	0.7	0.4	0.4	0.9	0.6	0.1	8.7
	1980	5.3	0.2	0.7	0.3	0.4	0.8	0.4	0.1	8.2
Mail-order catalogs	1979	0.9	[b]	[b]	[b]	[b]	0.1	[b]	[b]	1.0
	1980	0.4	[b]	[b]	[b]	[b]	[b]	[b]	[b]	0.4
Mass merchandisers and discount stores	1979	16.2	0.4	2.0	0.6	0.6	1.7	1.2	0.1	22.8
	1980	18.3	0.4	2.2	0.5	0.5	2.3	0.9	0.1	25.2
Armed forces stores	1979	3.6	[b]	0.6	[b]	[b]	0.4	0.1	[b]	4.7
	1980	4.0	[b]	0.7	[b]	[b]	0.3	0.2	[b]	5.2
Men's specialty/ other stores	1979	4.8	0.2	0.3	0.2	0.1	0.4	0.9	0.1	7.0
	1980	5.4	0.2	0.4	0.2	0.1	0.3	1.0	0.1	7.7
Export	1979	3.7	0.3	0.3	0.3	0.1	0.3	0.5	0.1	5.6
	1980	3.0	0.2	0.3	0.3	0.1	0.5	0.5	0.2	5.1
Total[c]	1979	66.6	2.6	8.5	3.7	3.0	7.2	7.5	0.6	100.0%
	1980	68.3%	2.3%	9.0%	3.3%	2.7%	6.9%	6.8%	0.7%	100.0

Source: Company records

a. I.e., "2.6% of 1979 dollar sales of MEM men's toiletries were of English Leather sold to department stores."

b. Sales volume less than 0.1%.

c. Final columns and rows may not total 100% because of rounding.

Exhibit 6 Market Shares of Major Men's Toiletries Brands for Three Classes of Trade, 1979

	Independent and Chain Drugstores	*Mass Merchandisers and Discount Stores*	*Food Stores*
English Leather	14.5%[a]	12.7%	na
Old Spice	16.4	20.5	20.8%
Mennen Skin Bracer	7.5	10.6	27.9
Brut	10.7	12.4	14.9
Four-brand share total	49.1%	56.2%	63.6%

Source: Rosenfeld, Sirowitz & Lawson, Inc.
Note: Data for general merchandise chains were not reported in this study.

a. I.e., "14.5% of dollar sales of after-shaves and colognes through independent and chain drugstores in 1979 were of English Leather brands."

Exhibit 7 1979 Income Statement for Men's Toiletries (percent)

Gross sales	100.00%
Raw materials	37.55
Direct labor	7.17
Contribution margin	55.28
Manufacturing overhead	2.34
Real estate, taxes, insurance, utilities, depreciation	2.02
Shipping[a]	8.09
Advertising and promotion	20.52
Field sales force	7.52
General and administrative	7.17
Net pretax income from operations	7.62
Other income[b]	1.47

Source: Company records
Note: Income statement does not include Lebanon Packaging Co., Tom Fields Ltd., and the Acqua di Selva and John Weitz lines.

a. Company prices include prepaid freight charges.
b. Net interest income on seasonal cash flows.

Exhibit 8 Summary of 1980 Promotions and Trade Deals

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1. Prepack containing 24 English Leather Power Foam for the price of 22 (2 free with 22), providing the trade a 45% margin at suggested retail price of $2.00.
2. Prepack of 12 four-piece gift sets containing cologne and after-shave in both English Leather and Musk. Tied into a SuperShooter consumer sweepstakes promotion, each package flagged "Regular $8.75 value, now $6.00."
3. Prepack containing 12 16-oz.-size English Leather Shampoo for the price of 11 of the regular 9-oz. size (1 free with 11), providing the trade a 45% margin at suggested retail price of $2.50 each.
4. Basket display prepack containing 1-oz. sizes of English Leather Cologne (72), Wind Drift and Musk (24 of each), and Lime and Timberline (12 of each), each priced at $1.00. Profit margin to trade—40%.
5. Prepack containing 12 English Leather Special Formula Deodorant Sticks for the price of 11 (1 free with 11), providing the trade a 45% margin at suggested retail price of $2.50 each.
6. Prepack containing 48 ½-oz. trial-size Musk Cologne for Men, priced at $1.50 each for impulse purchases. Profit margin to trade—40%.
7. Prepack containing 36 Pocket Mist-ers in six fragrances, priced at $2.50 each. Profit margin to trade—40%.
8. Prepack containing 36 1-oz. travel-size Racquet Club Cologne, priced at $1.50 each. Profit margin to trade—40%.
9. Prepack containing 6 4-oz. English Leather Cologne and 6 5-oz. Musk Cologne with new pump spray caps. Profit margin to trade—40%.
10. Prepack containing 12 5-oz. Musk Cologne for Men. Each package is flagged "Save $1.50, Regularly $6.50—Now Only $5.00." Profit margin to trade—40%.
11. A $6.00 value men's nail-care set offered for $3.00 with any $6.00 purchase of English Leather toiletries.
12. A $3.00 value English Leather gift set (containing after-shave, shave cream, and shampoo travel sizes) free with any $6.00 purchase of English Leather toiletries.
13. An executive briefcase plus a travel set of 1-oz.-size colognes in English Leather, Lime, Wind Drift, and Timberline, valued at $29.00, priced at $10.00.

Source: Company records

Exhibit 9 Men's Toiletries Communications Budgets, 1977–1980 (dollars in thousands)

	1977	1978	1979	1980 Budget[a]
Media advertising, advertising production costs, and trade promotions:[b]				
English Leather	$2,135	$2,753	$2,755	$2,750
Lime	132	0	0	0
Musk	308	310	350	350
Timberline	300	220	250	150
Wind Drift	300	230	250	150
Racquet Club	na	370	610	750
Subtotal	3,175	3,883	4,215	4,150
Co-op advertising	819	937	1,392	1,350
Sponsorships[c]	292	568	441	380
Point-of-sale samples, display fixtures	889	862	1,134	1,100
Sales sheets, flyers, brochures	107	133	140	150
Gift-with-purchase, purchase-with-purchase promotions	47	30	44	50
Public relations	40	50	46	50
Subtotal	2,194	2,580	3,197	3,080
Total	$5,369	$6,463	$7,412	$7,230
As % of sales	18.5%	19.5%	20.6%	20.0%

Source: Company records

Note: These figures exclude advertising and promotion expenditures for Acqua di Selva and John Weitz.

[a] As of December 1980, it appeared that actual expenditures would be close to budget.

[b] Figures for each line include cost of promotions and trade deals as well as cost of measured media advertising and production. Promotion costs allocated among lines on a prorated basis for cross-line events. Media advertising expenditures are reported in *Exhibit 11*.

[c] 1980 budget includes approximately $150,000 in media advertising to promote sponsored events.

Exhibit 10 Advertising Slogans of Men's Toiletries Brands

English Leather:	"All my men wear English Leather, or they wear nothing at all."
Old Spice:	"Put a little spice in your life with Old Spice."
Paco Rabanne:	"A cologne for men. What is remembered is up to you."
Denim:	"For men who don't have to try."
Chaps:	"It's the West. The West you feel inside of yourself."
Aqua Velva:	"It makes a man feel like a man."
Brut:	"Make every day your Brut day."
Pierre Cardin:	"For the man who gets the most out of life."
Aramis:	"The Aramis man. He expects everything."
Mennen Skin Bracer:	"For the man who takes care of himself."
Millionaire:	"Whatever you wear it with, you feel like a million bucks."

Source: Rosenfeld, Sirowitz & Lawson, Inc.

Exhibit 11 Measured Media Advertising Expenditures, 1979 and 1980 ($000)

	Total	*National TV*	*Network Radio*	*Consumer Magazines*	*Other*[a]
1979 Actual	$2,036	$1,554[b]	$126	$318	$38
1980 Budget[c]	2,470[d]	1,816	266	369	19
Quarter 2	561	290	133	128	10
Quarter 4	$1,909	$1,526[e]	$133	$241	$ 9

Source: Company records

Note: These figures exclude expenditures of Tom Fields Ltd., Lebanon Packaging Co., and minimal advertising expenditures for Acqua di Selva and John Weitz.

a. Includes spot TV and advertising in military publications.

b. Comprises $1,064,000 advertising on network TV and $489,000 on syndicated sports programs.

c. No advertising budgeted for the first or third quarters of 1980.

d. Measured media advertising costs rose 15% in 1980 over 1979.

e. Scheduled to deliver 640 household gross rating points (calculated as reach x frequency) during the five weeks before Christmas. During any four-week period, 92% of all U.S. households would be reached an average of 5.9 times.

Exhibit 12 1980 Focus Group Session: Summary of Findings

During April 1979 in New York City twelve women (average age 25) participated in a focus group session conducted by one of the company's advertising agencies, Chalk, Nissen, Hanft, Inc. Key findings included the following:

- Respondents preferred clean, natural fragrances for men. Strong fragrances for men were disliked; they were associated with a woman reeking of perfume.
- Men favorably remembered English Leather as the fragrance of their youth—the brand "all the guys wore in college." Other fragrances were now perceived as more sophisticated.
- Old Spice was typically remembered as "the fragrance my father used."
- Respondents agreed that men lack knowledge of fragrances. When buying men's fragrances as gifts, some respondents stated that they would follow their own preferences; others would follow the perceived preferences of the recipient.
- Designer fragrances were expected to reflect the fashion images of the designers.
- Respondents were skeptical that a dual set of fragrances such as Jovan Man and Jovan Woman could succeed in satisfying the fragrance needs of the male and the female.
- The name *Cambridge* in association with a men's fragrance was seen as classic, understated, and dignified. Respondents would expect the package design to reflect the traditional quality of the name.

Exhibit 13 Proposed New Product Introduction Program

Brand name:	Cambridge
Target customer:	Men, aged 18 to 34
Product line:	After-shave, cologne, bath soap, deodorant stick, shaving stick, gift sets
Retail price point:	$10 for 4-oz. cologne. Variable cost structure similar to other MEM men's toiletries.
Trade margin:	40%
Introductory deals:	5% and 10% off-invoice allowances on small- and large-size prepacks. Sales of each prepack were expected to account for one-third of 1981 Cambridge sales.
Sampling:	Production of one million ⅛-oz. samples to be distributed free at the point of sale at a cost of $200,000
Merchandising aids:	Counter display materials, brochures, and testers at a cost in 1981 of $50,000
Timing of launch:	First orders accepted in April 1981; first shipments in September 1981.
Sales target:	Gross factory sales of $3 million in 1981

Source: Company records

Exhibit 14 Three Media Plans for Cambridge Introduction

	Plan 1	*Plan 2*	*Plan 3*
Network television	$249,180	$570,480	$1,140,960
Spot television	384,000	411,116	1,016,070
Consumer magazines	286,058	379,213	609,925
Trade magazines	9,900	13,000	26,000
Production	70,052	70,174	100,000
Reserve	-	56,017	107,045
	$999,190	$1,500,000	$3,000,000

Source: Chalk, Nissen, Hanft, Inc.
Note: Reserve funds were used to finance one-time tie-in advertising efforts with individual retail accounts independent of co-op advertising.

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Sealed Air Corporation

Robert J. Dolan, associate professor, prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. Certain nonpublic data have been disguised.

The president and chief executive officer of Sealed Air Corporation, T. J. Dermot Dunphy, explained the firm's 25% average annual growth in net sales and net earnings from 1971 to 1980:

> The company's history has been characterized by technical accomplishment and market leadership. During the last 10 years we built on our development of the *first* closed-cell, lightweight cushioning material, introduced the *first* foam-in-place packaging system, and engineered the *first* complete solar heating system for swimming pools. We intend to follow the same management guidelines in the 1980s. We intend to seek market leadership because market leadership optimizes profit, and foster technological leadership because it is the only long-term guarantee of market leadership.

In July 1981 Barrett Hauser, product manager of Sealed Air's Air Cellular Products, was reflecting on Dunphy's management philosophy as he considered how Sealed Air should respond to some unanticipated competition in the protective packaging market. As product manager, Hauser was responsible for the closed-cell, lightweight cushioning material that Dunphy had mentioned. Sealed Air's registered trademark name for this product was AirCap.[1] AirCap cushioning materials had always faced a variety of competitors in the protective packaging market. More recently, however, several small regional producers had invented around Sealed Air's manufacturing process patents and begun to market cheap imitations of AirCap in the United States.

AirCap Cushioning and Its Competitors

AirCap cushioning was a clear, laminated plastic sheet containing air bubbles of uniform size (see *Exhibit 1*). The feature that differentiated AirCap cushioning from all other bubble products was its

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[1] Sealed Air, AirCap, and Instapak are registered ® trademarks of Sealed Air Corporation. Solar Pool Blanket is a TM trademark of the same corporation.

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"barrier-coating": each AirCap bubble was coated on the inside with saran. This greatly increased air retention, meaning less compression of the material during shipment and, consequently, better protection. Barrier-coating and its customer benefits had been the central theme of Sealed Air's AirCap cushioning selling effort for 10 years.

Between 1971 and 1980 Sealed Air and Astro Packaging of Hawthorne, New Jersey, were the only air bubble packaging material producers in the United States. Sealed Air licensed Astro to use Sealed Air's patented technology. Astro produced two types of bubbles: a barrier bubble similar to AirCap,[2] and an uncoated bubble. Its sales were split about evenly between the two. In 1980 Astro's total U.S. sales were approximately $10.5 million, compared with $25.35 million in U.S. sales for AirCap cushioning. Sealed Air's market education had made customers aware of the advantages of coated bubbles; consequently, uncoated bubbles had never achieved greater than a 15% dollar share of the U.S. market before 1980.

In July 1981 uncoated bubble operations were being set up in Ohio, California, and New York. GAFCEL, which served the metropolitan New York market, was the only competitor yet to achieve significant sales volume. Two GAFCEL salespeople—one full time, the other about half time—had reached a $1 million annual sales rate. Several of AirCap's distributors had taken on the GAFCEL line.

Hauser was preparing to recommend Sealed Air's reaction to these somewhat unanticipated competitors. The firm could produce an uncoated bubble as cheaply as GAFCEL within a month with no major capital investment; it could run on machines used for another Sealed Air product. If Hauser were to recommend that the historic champion of barrier-coating offer an uncoated bubble, he would have to specify timing, the marketing program for the new product, and any adjustments in policies for AirCap cushioning and Sealed Air's other products. As Hauser thought about his options, he again flipped through the training manual recently distributed to Sealed Air's sales force: "How to Sell against Uncoated Bubbles."

The Protective Packaging Market

The three major use segments of the protective packaging market were:

1. Positioning, blocking, and bracing: These protective materials had to secure large, heavy, usually semirugged items in a container. Typical applications included shipment of motors and computer peripherals.
2. Flexible wraps: These materials came under less pressure per square foot. Applications included glassware, small spare parts, and light medical instruments.
3. Void fill: These materials were added to prevent movement during shipping when an item and its protective wrap (if any) did not fill its carton.

The positioning, blocking, and bracing market was unique because of the heavier weights of items shipped. Flexible wrap and void fill were sometimes hard to separate because it was convenient to use the same product for both functions. The key distinction was that loose fills (for instance, polystyrene beads) dominated the void fill market but provided no cushioning protection and, hence, did not qualify as flexible wrap.

Until 1970 most materials used for protective packaging were produced primarily for other purposes. Heavy, paper-based products had dominated the market. Sealed Air was one of the first companies to approach the market with a customer orientation, i.e., it began product development with an assessment of packagers' needs. Since then a variety of products specifically designed for protective packaging had appeared.

Sealed Air served these markets with two products:

1. Instapak® foam-in-place systems (1980 worldwide sales of $38.8 million) could accommodate any application, though their most advantageous use was for heavy items. In this process two liquid chemicals were pumped into a shipping container. The chemicals rapidly expanded to form a foam cushion around the product. Instapak's comparative advantage resulted in a majority of applications in positioning, blocking, and bracing.
2. AirCap bubbles (1980 worldwide sales of

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[2] Astro's barrier bubble and the AirCap bubble differed in both manufacturing process and coating material. Astro used nylon rather than saran. The basic idea of reinforcing the polyethylene bubbles to improve air retention was, however, the same.

$34.3 million) primarily served the flexible wrap and void fill markets.

In addition to coated and uncoated polyethylene air bubbles, there were two major competitors in these markets: paper-based products (cellulose wadding, single-face corrugated, and indented kraft), and foams (polyurethane, polypropylene, and polyethylene).

An excerpt from an AirCap promotional brochure in *Exhibit 2* shows how Sealed Air positioned AirCap as a cost-effective substitute for these competitive products and loose fills. The brochure first pointed out the cost savings from AirCap cushioning, then presented results of "fatigue" and "original thickness retention" tests to demonstrate AirCap's protective superiority. *Exhibit 3* compares products competitive with AirCap cushioning and *Exhibit 4* gives their U.S. list prices, which represent relative costs for any order size from an end user. Quantity discounts were offered on all materials.

Buying Influences

The proliferation of packaging products and the lack of easily demonstrable universal superiority caused confusion among end users. For example, products such as pewter mugs were shipped around the United States in AirCap cushioning, Astro coated bubbles, or even old newspapers.

Users were a varied lot. Some bought on a scientific price/performance basis. They understood "cushioning curves" such as those in *Exhibit 5*. Sealed Air could provide independently measured cushioning curves for competitive products as well as its own. Regardless, many firms did their own testing.

At the other end of the spectrum were firms with "a purchasing-department mentality," as some packaging materials suppliers put it. Price per square foot was their first consideration, delivery their second. As one Sealed Air executive commented, "To these people, cushioning curves are like accounting numbers. They think you can make them say anything you want."

There were no systematically collected data on the buying process or the extent to which price dominated performance in the purchase decision. Based on his experience as a district sales manager and now product manager, Hauser guessed that a packaging engineer influenced about 40% of the material purchase decisions.

The U.S. Market

In 1980, dollar sales by segment in the U.S. protective packaging market were:

- Positioning, blocking, and bracing: $585 million
- Flexible wrap: $126 million
- Void fill: $15.6 million

Exhibit 6 breaks down total sales for the flexible wrap market by product type for 1975, 1978, and 1980.

AirCap cushioning annual sales in the United States since 1972 were:

Year	*Gross Sales (in millions)*	*Year*	*Gross Sales (in millions)*
1972	$7.7	1977	$16.4
1973	10.0	1978	18.4
1974	13.0	1979	21.2
1975	12.8	1980	25.3
1976	14.6		

Despite the high cost of coated bubbles relative to the uncoated product, Sealed Air had kept most of the U.S. air bubble market. Key factors were Sealed Air's patent protection and licensing of only one competitor, extensive market education, and the packaging mentality in the United States. Packaging engineers enjoyed a status in U.S. organizations not accorded them elsewhere. Packaging supplies were viewed as a productive, cost-saving resource. In contrast, recent research by Sealed Air indicated that many European firms viewed packaging supplies as "expendable commodities."

The European Market

Sealed Air had manufacturing operations in England and France and a sales organization in Germany.[3] It was the only company selling a coated product in these countries. Sales figures for 1980 were:

Country	*Total Bubble Sales*	*AirCap Sales*
England	$3,649,000	$2,488,500
France	4,480,000	592,200
Germany	7,688,000	404,600

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[3] The firm also had a manufacturing facility in Canada and a sales organization in Japan. Sealed Air licensees operated manufacturing facilities in Australia, Mexico, South Africa, and Spain.

Table A Differing Grades of Aircap Cushioning

Bubble Heights

SB: 1/8 in. high, used for surface protection when cushioning requirements were minimal.

SC: 3/16 in. high, used primarily for wrapping small, intricate items, possibly for larger items if not very fragile.

ST: 5/16 in. high, used in same kinds of applications as SC grade, except with slightly greater cushioning requirements. Also used as a void fill.

SD: 1/2 in. high, used for large, heavy, or fragile items or as a void fill.

Plastic Film Thicknesses

Light duty (110): each layer of film was 1 mil (1/1,000 of an inch) thick; used for light loads.

Regular duty (120): one layer of 1 mil and one layer of 2 mils; for loads up to 50 lbs. per sq. ft.

Heavy duty (240): one layer of 2 mils and one of 4 mils; for loads up to 100 lbs. per sq. ft.

Super duty (480): one layer of 4 mils and one of 8; for loads over 100 lbs. per sq. ft.

England. Sealed Air had developed the protective packaging market here and had good distribution. Later on, Sansetsu, a Japanese firm, began marketing a high-quality uncoated product made in Germany. Prices for the uncoated bubble were 50% less than the cost of comparably sized AirCap cushioning. Sansetsu and other uncoated bubble manufacturers had chipped away at Sealed Air's one-time 90% market share. The most pessimistic Sealed Air distributors estimated that the firm would lose 50% of its current market share to uncoated bubbles within three years.

France. Here, Sealed Air owned an uncoated bubble manufacturer, SIBCO, with sales of $750,000 in 1980. In 1972 SIBCO was the only marketer of uncoated bubbles in France. Two major competitors, one with superior production facilities, had entered the market. Uncoated bubbles were priced about 40% lower than AirCap, and price was the key buying determinant. The major French distributor of AirCap cushioning had a 50–50 mix of coated and uncoated sales in 1978. In 1980 the mix had changed to 70–30 (uncoated over coated), with 90% of new bubble applications being uncoated.

Germany. AirCap cushioning was a late entrant (1973) to the German market and never held commanding share. Moreover, from 1978 to 1980, it had lost share at a rate of 20% to 30% per year. Sansetsu had an efficient manufacturing facility in Germany and sold approximately $6 million of uncoated product in 1980. (The price for uncoated was about 35% less than for coated.)

AirCap Cushioning

Grades and Sales

AirCap cushioning grades differed in bubble height and thickness of the plastic films. Bubble heights were designated by a letter code, and the plastic films came in four thicknesses (see *Table A*). Sealed Air produced eight different height/thickness combinations (see *Table B*). Some of the known end uses for each grade are shown in *Exhibit 7*.

Table B Eight Different Height/Thicknesses by Sealed Air

Height (inches)	*Thickness* 110	120	240	480
SB–1/8	X			
SC–3/16		X	X	
ST–5/16		X	X	
SD–1/2		X	X	X

Table C AirCap Sales by Grade

	Sales in 1,000 Square Feet	
Grade	*July–December 1979*	*January–June 1980*
1/8 in.		
SB-110	59,128	48,513
3/16 in.		
SC-120	76,349	81,014
SC-240	5,036	4,426
5/16 in.		
ST-120	31,912	42,234
ST-240	4,369	3,914
1/2 in.		
SD-120	44,252	43,624
SD-240	25,202	21,799
SD-480	3,138	1,358
Total sales	249,386	246,882

Note: In addition, because SB-110 could not compete in price against foams for many surface protection applications, Sealed Air introduced an A-100 grade in January 1980. The A-100 bubble was 3/32 in. high—the shortest coated bubble Sealed Air could make with available technology. January to June 1980 sales of A-100 were 17,802,000 sq. ft.

Sales by grade for the last six months of 1979 and the first six months of 1980 are shown in *Table* C.

Pricing

All AirCap cushioning was sold through distributors. Prices reflected Sealed Air's costs and the prices of competitive products. Variable costs and prices to the distributor are shown in *Table D*.

Sealed Air's suggested resale price list is shown in *Exhibit 8*. Largely because of its selective distribution policy, distributors generally followed this list. The price schedule entailed quantity discounts for end users. Thus, distributor margins varied with the size of the customer's individual order. (Quantity price was determined by the total square footage of a single order, combining all grades, ordered for shipment at one time to a single destination.) In some major metropolitan areas, up to 50% of AirCap business was truckload/railcar orders by end users. In this event Sealed Air shipped the material from its plant directly to the end user; the distributor received a 10% margin and handled user credit and technical service. In some markets the percentage of direct shipments was as low as 10%.

Selling Effort

Sealed Air's U.S. operation consisted of 7 regional manufacturing operations, 62 salespeople (each selling AirCap cushioning, Instapak, and other Sealed Air products), and 370 distributors. To control the shipping cost of its bulky product, Sealed Air had regional manufacturing operations in three eastern states, Ohio, Illinois, Texas, and California. The regional presence, however, had proven to be an effective sales promotion device as well.

Before Instapak was acquired in 1976, 28

Table D AirCap Variable Costs and Distributor Prices (in dollars per 1,000 sq. ft.)

Grade	*Manufacturing*	*Freight*	*(1) Total Variable Cost*	*(2) Price to Distributor for Truckload Delivery*[a]	*(2) − (1) Sealed Air Dollar Margin*
A-100 (3/32 in.)	$12.46	$1.32	$13.78	$20.60	$6.82
SB-110 (1/8 in.)	14.02	1.99	16.01	30.25	14.24
SC-120 (3/16 in.)	17.92	2.64	20.56	43.50	22.94
SC-240 (3/16 in.)	29.83	2.64	32.47	56.30	23.83
ST-120 (5/16 in.)	25.36	5.29	30.65	51.40	20.75
ST-240 (5/16 in.)	32.83	5.29	38.12	65.35	27.23
SD-120 (1/2 in.)	28.38	7.93	36.31	65.35	29.04
SD-240 (1/2 in.)	36.52	7.93	44.45	78.60	34.15
SD-480 (1/2 in.)	62.88	7.93	70.81	140.90	70.09

a. Less than truckload shipments were priced 15% to 20% higher. Consequently, distributors almost always ordered in truckload quantities. They were allowed to mix grades within an order. Depending on the grade ordered, a truckload could contain 70,000 sq. ft. (all SD-480) to 420,000 sq. ft. (all A-100).

salespeople devoted 90% of their time to AirCap cushioning products. In 1981 the 62-person force was expected to allocate time as follows: 60% to Instapak systems, 35% to AirCap cushioning, and 5% to other Sealed Air products. (*Exhibit 9* shows Sealed Air sales by product line and other financial data.)

Part of Sealed Air's market share leadership philosophy was a consultative selling approach. Salespeople spent about half their time making cost studies at end-user locations. With the help of Sealed Air's packaging labs, salespeople attempted to show how their products could save on material and labor cost and reduce damage in the end user's particular situation. Distributors' salespeople took orders on AirCap cushioning but did little to demonstrate AirCap use and application to customers. If a distributor's salesperson identified a potential AirCap account, he or she would inform the Sealed Air salesperson and a joint call would be arranged. In this way the potential account learned about the product and ordering procedures simultaneously.

Distributors sometimes complained to Sealed Air about the level of AirCap selling effort. Since distributor's margins on AirCap cushioning were generally higher than the 10% to 12% for Instapak sales, distributors were not happy with Sealed Air's greater allocation of salesperson time to Instapak. Some distributors said they would be content if the salesperson in their area really allocated 35% to AirCap; some claimed the actual AirCap selling effort amounted to only 20%. Instapak's sales growth had been impressive, but some Sealed Air executives felt this had cost them some distributor satisfaction.

Both distributors and end users regarded Sealed Air's salespeople as among the best trained and most knowledgeable in the packaging industry. Sales force salaries were above average. They were composed of a base salary plus commissions of 2% on net AirCap sales and 1% on net sales of all other products, including Instapak. (As an added incentive Sealed Air gave salespeople $75 for each Instapak dispenser placed. It took back $75 for each one removed.) In a typical week a salesperson called on 20 end users and checked in with two or three distributors.

U.S. Distributors

During the 1970s Sealed Air invested heavily in developing a selected distributor network. The firm had 370 distributors by 1980. Sealed Air considered 135 of these their "first-line distributors" because they collectively handled over 80% of its business. The 20 largest AirCap distributors handled about 35% of the business. Larger distributors typically carried both Instapak foam-in-place and AirCap cushioning. The largest distributor of Sealed Air products had 1980 Sealed Air sales of approximately $2 million, just about half of which were AirCap.

Distributors traditionally tried to be full-line houses—capable of meeting each customer's complete packaging needs—so they carried a broad range of products. A survey of Sealed Air's first-line distributors showed that 83% carried loose fills, 65% carried polyethylene foam, and 29% carried Du Pont's polypropylene foam. Although most carried competitive products, distributors had displayed loyalty to Sealed Air and AirCap cushioning. Sealed Air, in turn, had kept to its selective distribution policy.

Competing Uncoated Bubble Cushioning

Sealed Air considered both types of bubbles made by Astro as inferior products. GAFCEL, the new regional producer, made a "decent product" in Hauser's estimation; he felt that its success to date came largely at Astro's expense.

The New York metropolitan market was ideal for the new producer. It was not customer- or distributor-loyal, and price was a key variable. Sealed Air's estimate of GAFCEL sales rates was $750,000 per year for the ½-in.-high uncoated bubble and $250,000 per year for the 3/16-in. bubble. Both had two layers of film 2 mils each.

GAFCEL's distributor prices for truckload shipments and suggested resale prices to end users for the metropolitan New York market are shown in *Table E*. (Astro's uncoated bubble prices are in *Exhibit 4*.)

Sealed Air had not yet extensively tested the GAFCEL uncoated bubble. Although it was better than Astro's uncoated, its performance would not be dramatically different from that found in previous uncoated testing (see *Exhibit 2*). In terms of cushioning curves, the ½-in. GAFCEL bubble was comparable to Sealed Air's ST-120 or SD-120 for very light loads, not greater than 0.15 lbs./sq. in. pressure. At greater loads, however, the acceleration curve would increase rapidly, moving above even the SB-110 by pressures of 0.25 lbs./sq. in. (see *Exhibit 5*).

Table E GAFCEL's Distributor Prices per 1,000 Sq. Ft.

	SO-22 (3/16 in.)	*LO-22 (1/2 in.)*
Distributor-truckload	$31.63	$36.03
Suggested resale by order size:		
1,000 sq. ft.	$56.54	$75.24
20,000 sq. ft.	47.12	62.70
40,000 sq. ft.	42.84	57.07
100,000 sq. ft.	39.40	44.68
Truckload	34.79	39.63

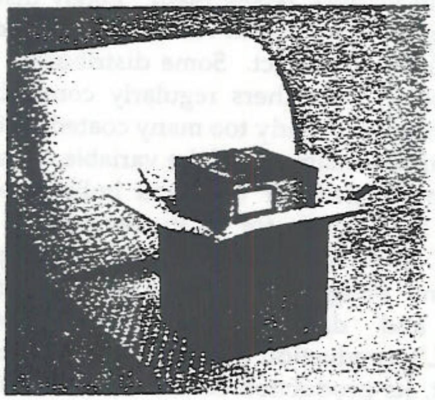
Sealed Air Decisions

Sealed Air had conducted a good deal of research on manufacturing uncoated bubble products. It knew the best production process would be similar to that currently used for its Solar Pool Blankets™. Thus, the firm could begin manufacture of an uncoated product quickly in its New Jersey plant. Likely distributor response to a Sealed Air uncoated product was difficult to predict. Some distributors had requested it, but others regularly complained that there were already too many coated grades.

Preliminary estimates of the variable costs for producing Sealed Air uncoated bubbles were $19 per 1,000 sq. ft. for 3/16 in. height, $20 per 1,000 sq. ft. for 5/16 in., and $21 per 1,000 sq. ft. for 1/2 in. Freight cost depended on bubble height and distance shipped. Although GAFCEL's production process was completely different, its production costs were believed to be comparable.

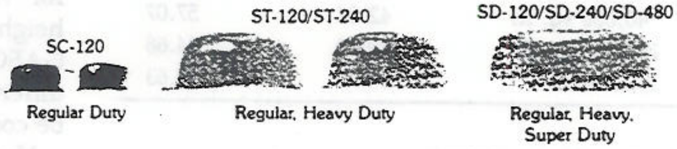
Hauser now had to decide whether to recommend that Sealed Air enter the uncoated bubble market (with an about-face on its previous exclusive emphasis on coated bubbles), or whether to suggest some other reaction to its new competitors.

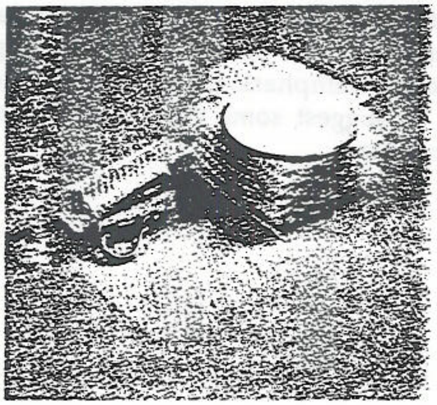
Exhibit 1 AirCap® Product and Uses



Cushioning

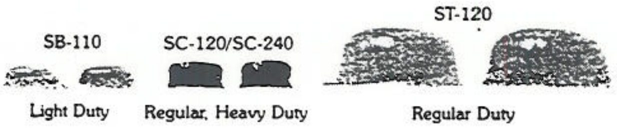
AirCap® air bubble cushioning protects products against shock and vibration during handling and shipping by literally floating them on a cushion of air. This material offers consistent performance because our unique *barrier-coating* guarantees air retention. AirCap withstands repeated impact since it will not fatigue or take a compression set. Cushioning applications include a range of products from lightweight retail items to delicate power supplies weighing several hundred pounds. Choose the grade that best fits *your* cushioning application!

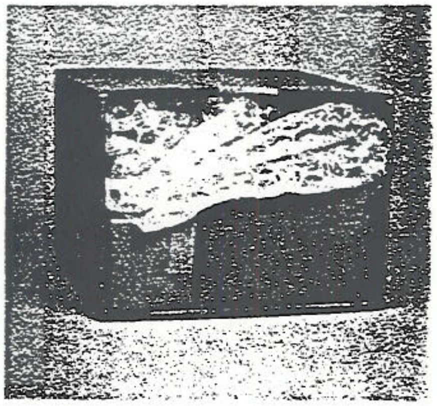

SC-120
Regular Duty
ST-120/ST-240
Regular, Heavy Duty
SD-120/SD-240/SD-480
Regular, Heavy, Super Duty



Protective Wrap/Interleaving

AirCap is an excellent "protective wrap" material and ideal for "interleaving" between similarly shaped items. It is clean, non-abrasive, easy to use and provides superior surface protection. Lay your product on AirCap sheeting, fold it over and your product is fully protected! Typical protective wrap/interleaving applications include china, glassware, printed circuit boards, and spare parts.


SB-110
Light Duty
SC-120/SC-240
Regular, Heavy Duty
ST-120
Regular Duty



Void Fill

When a void in a package is not completely filled, the cushioned product may migrate within the shipping container. This movement is a major cause of damage in transit. Since large *regular-duty* AirCap bubbles do not compress, they fill voids effectively and eliminate product movement. Simply stuff AirCap sheeting into the carton, (left) or use an economical rolled "log". It's easy, clean, lightweight and cost efficient!

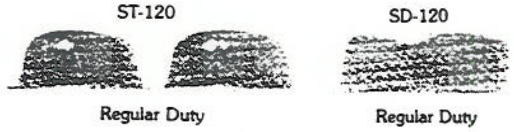
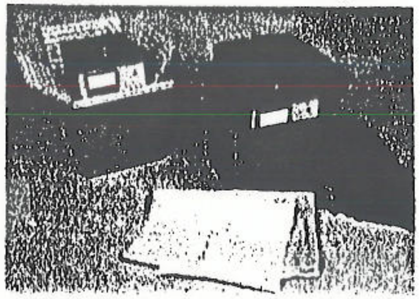

ST-120
Regular Duty
SD-120
Regular Duty

Exhibit 2 Sealed Air Presents AirCap as Cost-Effective Substitute

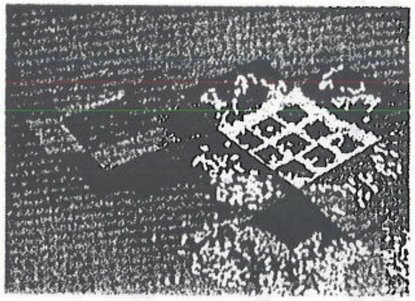
Typical Cost-Savings Comparisons



AirCap Vs. Corrugated Inserts

A manufacturer using corrugated inserts, cellulose wadding and polyethylene bags eliminated the need to inventory many packaging components (right), and reduced labor 84% by switching to AirCap (left)

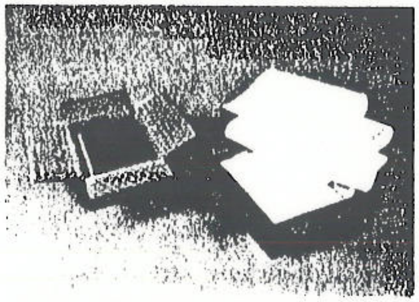
Item	Corrugated Package	AirCap Package
Carton	$ 55	$ 55
Inner packaging	80	1 05
Labor	83	13
Freight	2 60	2 40
Total cost	$4 78	$4 13
Savings using AirCap		$ 65



AirCap Vs. Loose Fills

A distributing firm found that it needed an excessive amount of flowable to prevent product migration. A new AirCap package (left) using a simple criss-cross technique resulted in reduced material, shipping, labor and carton costs

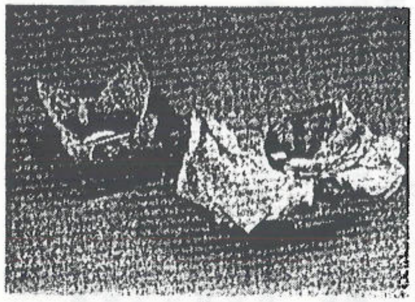
Item	Loose Fill Package	AirCap Package
Carton	$ 73	$ 47
Inner packaging	75	54
Labor	42	25
Freight	3 02	2 72
Total cost	$4 92	$3 98
Savings using AirCap		$ 94



AirCap Vs. Thin-Grade Foams

An electronic service center employing the use of a thin-grade foam (right) required many layers of wrapping to protect against shock and vibration. Large AirCap bubbles (left) provided superior performance and lower packaging costs

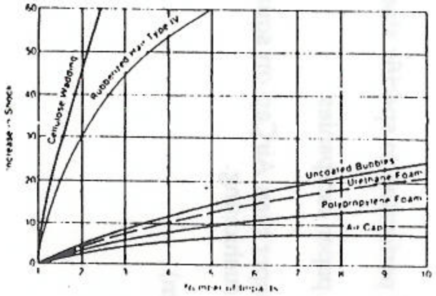
Item	Foam Package	AirCap Package
Carton	$ 46	$ 38
Inner packaging	1 33	87
Labor	66	33
Freight	4 09	3 94
Total cost	$6 54	$5 52
Savings using AirCap		$1 02



AirCap Vs. Cellulose Wadding

A metering firm discovered it needed only half as much AirCap to achieve the same performance that cellulose wadding provided (right). In addition to lowering material costs, AirCap (left) is clean, lint free, non abrasive and lightweight

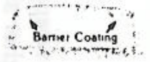
Item	Cellulose Wadding Package	AirCap Package
Carton	$ 30	$ 22
Inner packaging	22	12
Labor	25	08
Freight	1 35	1 20
Total cost	$2 12	$1 62
Savings using AirCap		$ 50



Resists Fatigue

In the transportation environment, packages are subjected to many jolts, bumps and shocks that can potentially cause damage. To function effectively, a cushioning material must retain its ability to protect over a series of repeated impacts. The loss of protective ability during repeated impact is termed "material fatigue".

This graph (left) indicates the increased shock an average product (0.25 psi) will receive during a ten-drop sequence from 24 inches. Test results show *barrier-coated* AirCap® outperforms all materials tested



BARRIER-COATING

Each individual AirCap bubble is *barrier-coated* to retain the air

Material Tested	Initial Thickness Loss Upon 0.4 psi Load	Gradual Thickness Loss After 30 Days	Total Thickness Loss
AirCap® SD 240	7%	7%	14%
Polypropylene Foam	19%	11%	30%
Polyethylene Foam	16%	24%	40%
Cellulose Wadding	26%	12%	38%
Rubberized Hair IV	24%	27%	51%
Uncoated Bubbles (Large)	14%	50%	64%
Urethane Foam (1.25 pcf)	53%	*	*
Embossed Polyethylene (Hex)	54%	*	*

*30 day evaluation not conducted due to excessive initial thickness loss

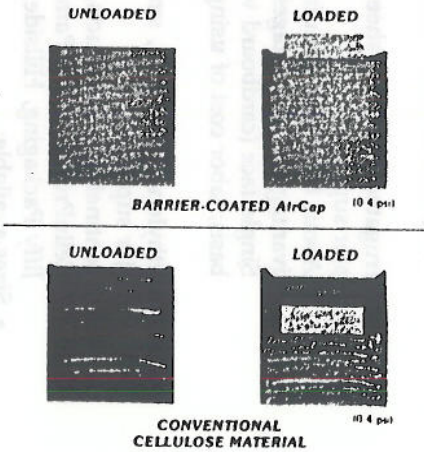
Retains Original Thickness

When a load is placed on a cushioning material two things occur that may contribute to a deterioration in its performance. First, is the *immediate* compression of the material. Second, is the additional, more *gradual* loss of thickness, termed "creep". Generally, excessive thickness loss of a material results in increased material usage in cushioning and dunnage applications. Creep may contribute to product damage as the loss of thickness creates a void in a package, allowing the product to move, shift or migrate.

This chart (left) demonstrates how *barrier-coated* AirCap retains its original thickness better than all materials tested and provides product protection throughout the entire packaging, shipping, handling and storage cycle

IMMEDIATE THICKNESS LOSS

AirCap retains its original thickness upon the immediate application of a load (See Below)



GRADUAL THICKNESS LOSS (CREEP)

AirCap's unique *barrier-coating* retains the air more effectively than uncoated bubbles, eliminating creep

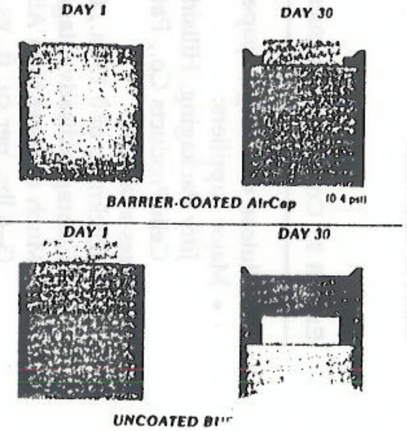


Exhibit 3 Competitive Product Information

1. Cellulose wadding (a paper-based product which tries to trap air between piles of sheeting)
   - Major suppliers:
     Jiffy Packaging, Hillside, N.J.
     CelluProducts Co., Patterson, N.C.
   - Sizes available:
     Thickness of 0.17 in., 0.25 in., 0.37 in., 0.50 in.
   - Advantages/disadvantages:
     Much cheaper than AirCap in thin grades; will not mark item wrapped; heavier than AirCap (3–4 lbs. per cu. ft. vs. less than 1 lb. for AirCap) meaning higher shipping cost; excessive compression under heavy loads (see test results, *Exhibit* 2).

2. Corrugated products (sheets of ribbed cardboard, often cut and perforated to specific sizes)
   - Major suppliers:
     About 800 firms manufacturing in 47 states, including larger paper companies.
   - Advantages/disadvantages:
     Single face (cardboard with ribs on one side) appreciably cheaper than AirCap on square-foot basis; labor cost of using corrugated usually very high; poor cushioning.

3. Polyethylene foam (thin, smooth, rigid sheets of low-density foam)
   - Major suppliers:
     Sentinel Foam Products, Hyannis, Mass.
     CelluProducts Co., Patterson, N.C.
     Jiffy Packaging, Hillside, N.J.
   - Sizes available:
     48 or 68 in. wide rolls of thickness 1/16, 3/32, 3/16, 1/4 in.
   - Advantages/disadvantages:
     Appreciably cheaper than AirCap in thin grades on square-foot basis; does not mark item wrapped; rigid product means hard to work with; tendency to tear; cushioning inferior to AirCap; more expensive than AirCap in thicker grades.

4. Polypropylene foam (thin, coarse, rigid sheets of low-density foam)
   - Major supplier:
     Du Pont Microfoam
   - Sizes available:
     Standard 72 in. wide rolls of thickness 1/16, 3/32, 1/8, 3/16, 1/4, 3/8 in.
   - Advantages/disadvantages:
     Basically the same as for polyethylene foam.

Exhibit 3 (continued)

5. Loose fills (expanded polystyrene beads, peanuts, etc.)
   - Major suppliers:
     Many small firms
   - Advantages/disadvantages:
     50% cheaper than AirCap on cubic foot basis; messy; poor cushioning.

6. Uncoated bubbles (sheets of small air bubbles made of polyethylene film)
   - Major producer:
     Astro, Hawthorne, N.J. (Sealed Air licensee)
   - Sizes available:
     48 in. wide roll standard, bubble heights 3/16, 1/4, 1/2 in. Bubbles also varied in the thickness of the films used. Generally, thicknesses were 1, 2, 3 or 4 mils with increasing film thickness giving greater strength.
   - Advantages/disadvantages:
     Cheaper than comparable height coated bubble; excessive air loss over time (about 65% height loss under 50 lbs. per sq. ft. pressure over 30 days vs. 15% for AirCap).

7. Competitive coated bubble (essentially the same as uncoated bubble except nylon film coating added)
   - Major supplier:
     Astro, Hawthorne, N.J. (Sealed Air licensee)
   - Sizes available:
     48 in. wide roll standard, bubble heights 1/8, 3/16, 1/4, 1/2, 1 in.
   - Advantages/disadvantages:
     Under heavy loading, nylon barrier holds up better than Sealed Air's saran barrier; poor quality control (bubble heights generally 13% less than specified).

Exhibit 4 Suggested End User Prices (in dollars) for Major Competitive Products

1. Paper-Based

Cellulose Wadding (Jiffy Packaging)		
Thickness (in.)	*Price*	*Single-Face Corrugated*
0.17	$27.70	$22.75
0.25	37.40	
0.37	50.60	
0.50	65.00	

2. *Foams*

Thickness (in.)	*Jiffy Packaging (polyethylene)*	*Sentinel Products (polyethylene)*	*Du Pont Microfoam (polypropylene)*
1/16	$20.30	$18.20	$17.20
3/32	25.90	24.00	25.17
1/8	34.15	32.70	34.90
3/16	53.35	49.40	53.86
3/8	na	na	109.72

3. *Competitive Bubbles (Astro)*

Coated Nylon			*Uncoated—Polyethylene*		
Bubble Height (in.)	*Film Thickness[a] (mils)*	*Price*	*Bubble Height (in.)*	*Film Thickness[a] (mils)*	*Price*
1/8	1 and 1	$35.25			
3/16	1 and 2	49.50	3/16	2 and 3	$47.00
1/4	1 and 2	57.00	1/4	2 and 3	54.50
1/2	1 and 2	71.75	1/2	2 and 4	65.75
1/2	2 and 4	87.75			
1	1 and 2	90.00			
1	2 and 4	110.00			

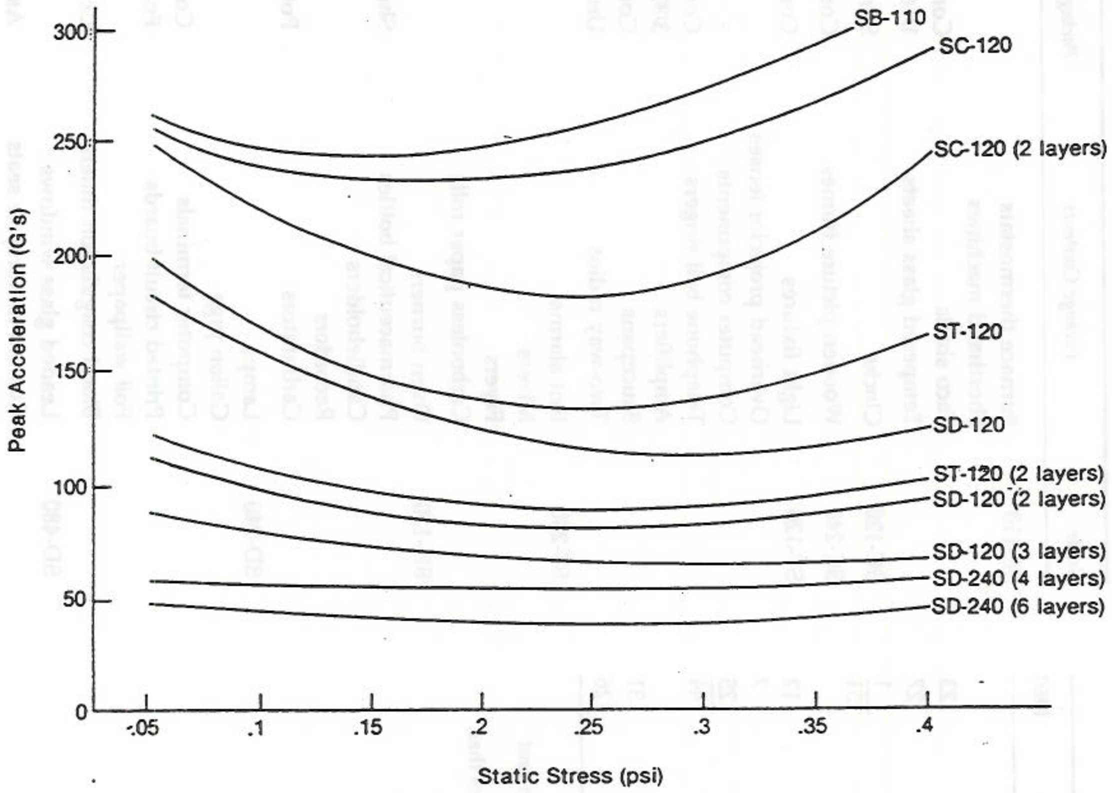
Note: Prices are per 1,000 sq. ft. based on a 50,000-sq.-ft. order.

a. Each bubble is made of two layers of film. Thicknesses shown are for individual layers in mils. Thicker film produces a stronger product.

Exhibit 5 Comparative Cushioning Performance by Grade

Engineered To Provide Superior Cushioning

The test data on the graph below was developed by the Lansmont Corporation, an independent testing laboratory. The test method used closely simulates actual shipping conditions, and employs the use of an enclosed test block and shock machine. Five bottom drops were executed from 24 inches at each static stress. The last four drops were averaged to arrive at data points used to develop each cushioning effectiveness curve. This data illustrates AirCap's superior performance over a wide range of loadings, and may be used for comparison and to specify the best AirCap grade and thickness for your cushioning requirements. (SD-240 curves taken from data provided in Military Handbook 304-A).



Source: AirCap brochure
Note: To be read: For a product exerting 0.25 lbs. per sq. in. of pressure on the packaging material while at rest, the peak acceleration (a measure of shock to the product) when dropped from 2 ft. is 118 g. if SD-120 is used, 260 g. if SB-110 is used.

Exhibit 6 U.S. Market—Flexible Wraps by Product Type
(In millions of manufacturers' dollars)

	1975	*1978*	*1980*
Paper-based			
Cellulose wadding	20	23	23
Single-face corrugated	20	25	27
Indented kraft	1	1	1
	41	49	51
Foams[a]			
Polyurethane	10	11	12
Polypropylene	4	5	7
Polyethylene	1	6	25
	15	22	44
Polyethylene air bubbles[b]			
Coated and uncoated (combined)	15	22	31
Total	71	93	126

Source: Company records

a. Sales figures exclude nonpackaging uses, such as construction and furniture industries.

b. Figures are for flexible wrap market only and are therefore less than AirCap's and Astro's total U.S. sales.

Exhibit 7 AirCap Applications by Grade

Grade	*Package Contents*	*Packaging Material Displaced (if known)*
SB-110	Furnace thermostats	
	Shorthand machines	
	Taco shells	Corrugated
	Tempered glass sheets	1/16-in. polypropylene foam
SC-120	Clocks	Shredded paper
SC-240	Wooden picture frames	Corrugated
ST-120	Light fixtures	Corrugated
	Overhead projector lenses	
	Computer components	
	Telephone bell ringers	Corrugated
	Amplifiers	3/32-in. polyethylene foam
	Saucepans	Corrugated
	Two-way radios	Urethane foam pads
ST-240	Exit alarms	
	Mixers	
	Fryers	
	Carbonless paper rolls	
SD-120	Oven burners	
	Pharmaceutical bottles	Shredded paper
	Candleholders	
	Recorders	
	Carburetors	Polypropylene foam
SD-240	Lamps	
	Gallon jugs	
	Computer terminals	Corrugated
	Printed circuit boards	Foam pads and corrugated
	Foil wallpaper	
	Blood coagulation timers	Corrugated
SD-480	Leaded glass windows	
	Custom motorcycle seats	Astro uncoated bubble LP-24
	Motor controls	

Exhibit 8 Suggested U.S. Resale Price List, Effective March 1980

Item (thickness in inches)	*Sq. Ft. per Order per Single Destination*	*Price per 1,000 Sq. Ft.*
A-100 (3/32)	1,000 or more	$34.30
	5,000 " "	30.85
	10,000 " "	27.45
	30,000 " "	25.70
	50,000 " "	24.75
	Truckload/railcar	22.80
SB-110 (1/8)	1,000 or more	50.00
	5,000 " "	45.40
	10,000 " "	40.90
	30,000 " "	38.10
	50,000 " "	37.05
	Truckload/railcar	33.50
SC-120 (3/16)	1,000 or more	71.70
	5,000 " "	64.55
	10,000 " "	57.40
	30,000 " "	53.75
	50,000 " "	52.60
	Truckload/railcar	47.65
SC-240 (3/16)	1,000 or more	93.40
	5,000 " "	84.40
	10,000 " "	74.95
	30,000 " "	70.20
	50,000 " "	68.60
	Truckload/railcar	62.25
ST-120 (5/16)	1,000 or more	85.30
	5,000 " "	77.10
	10,000 " "	68.50
	30,000 " "	64.25
	50,000 " "	62.75
	Truckload/railcar	$57.25
ST-240 (5/16)	Same price per 1,000 sq. ft. as SD-120	
SD-120 (1/2)	1,000 or more	$107.85
	5,000 " "	97.70
	10,000 " "	87.55
	30,000 " "	81.40
	50,000 " "	79.35
	Truckload/railcar	72.40
SD-240 (1/2)	1,000 or more	130.75
	5,000 " "	118.30
	10,000 " "	105.95
	30,000 " "	98.55
	50,000 " "	95.70
	Truckload/railcar	87.25
SD-480 (1/2)	1,000 or more	232.75
	5,000 " "	210.55
	10,000 " "	188.35
	30,000 " "	175.55
	50,000 " "	171.25
	Truckload/railcar	$155.60

Exhibit 9 Selected Financial Data ($ thousands)

	1976	*1977*	*1978*	*1979*	*1980*
Net sales by class of product					
Air cellular packaging	$18,872	$21,422	$25,028	$29,996	$34,330
Foam-in-place packaging	3,049	15,489	21,133	29,056	38,802
Other packaging	4,553	3,595	3,453	3,432	3,688
Recreational and energy prod.		2,682	4,644	7,951	11,777
Total worldwide	$26,474	$43,188	$54,258	$70,435	$88,597
United States	–	35,765	43,410	54,325	67,344
Costs and expenses					
Cost of sales	$16,451	$24,270	$31,111	$43,199	$54,125
Marketing, administration, development	6,696	12,093	14,527	16,855	21,485
Other income (expense)	32	(816)	(738)	(278)	(119)
Earnings before income tax	3,359	6,009	7,882	10,103	12,868

Source: Sealed Air Annual Reports 1979, 1980.

Harvard Business School

9-582-063
Rev. 9/83

6

WHARTON REPROGRAPHICS

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PIXLEY-RICHARDS, INC.

In September 1981, Mr. David Pixley and Mr. Peter Richards, co-owners of Pixley-Richards, Inc., were considering an opportunity for their young company. Fifteen years earlier, the two men had founded their firm in Plymouth, Massachusetts as a custom manufacturer of small precision components, primarily for customers in the electronics industry. Since then, the company's business had been almost entirely based upon custom-molded, plastic components. However, the company had recently developed several manufacturing processes and assembly techniques which, the owners believed, had potentially broader applications to electronic systems design and manufacturing.

Particularly interesting were the market opportunities for subassemblies. Customer representatives at Pixley-Richards believed a substantial portion of the electronics industry might prefer to procure entire subassemblies rather than purchase discrete component parts. The owners and several managers at Pixley-Richards believed the development of subassembly business could build on the company's current expertise and reputation in specialized plastics molding. If so, the subassembly market could mean a chance to sustain the company's growth and increase profitability.

Pixley-Richards already had, through its plant in Tempe, Arizona, some limited participation in the subassembly business. But it was not clear whether the subassemblies currently produced there were the beginnings of a new, sustained business opportunity or temporary jobs. Due to the varied nature of subassembly work, moreover, reliable data about market size and growth were unavailable. Mr. Pixley and Mr. Richards believed the subassembly market was potentially large but, from their perspective at least, almost totally undefined.

Company Background

Pixley-Richards, Inc. was founded in August 1965 when David Pixley and Peter Richards decided to put their knowledge of molded plastics to work in their own company. "We talked about it for two years," said Mr. Richards. "Both of us lived in Duxbury, Massachusetts and we commuted together. We actually planned the business while we travelled to and from our old jobs." Their previous jobs were with Haveg Industries, Inc., a subsidiary of Hercules

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This case was prepared by Frank V. Cespedes, Senior Research Associate, under the supervision of Associate Professor John F. Cady as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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Powder Company, where Mr. Pixley was product manager for the plastics division and Mr. Richards was sales manager for aircraft parts. "Our backgrounds complemented each other," Mr. Pixley observed. "Pete is sales oriented, and I'm an engineer."

With $5,000 of savings each, the two men set up shop in the basement of a Plymouth, Massachusetts fish-processing plant where a bootleg still operated during Prohibition and where, in the 1960s, "the place looked and smelled like a dungeon." The partners started with two machines and, Mr. Richards recalled, "we ran everything ourselves. We had no billings until December of 1965. To get started, we had to take jobs other people didn't want. Low-volume, overnight jobs. We ran our first job the same night and delivered it the next morning for $100." In 1966, its first full year of operations, Pixley-Richards grossed $60,000 in sales. By 1970, sales volume had reached $300,000. That growth enabled the company to move, in 1970, from its basement location into new quarters amid the greenery of the Plymouth Industrial Park. The $150,000 plant, designed by Mr. Pixley's father-in-law, was financed with loans from the Small Business Administration (50%), a local bank (40%), and the Plymouth Industrial Park (10%).

In 1971 the company added another plant; Pixley-Richards West, Inc. was begun as a separate division in Tempe, Arizona. Mr. Pixley recalled that "in the Southwest, we found that big companies in that area were not getting quality work from the local plastics molders, who did not seem to understand the products and technologies in the electronics industry, for which they were providing molded components. We had developed that knowledge and expertise and, with Buzz Mosher (a former plastics expert at Motorola), we saw an opportunity in that area." The Tempe organization sold west of the Mississippi River, while Plymouth sold to customers in the east. In general, the Tempe plant concentrated on larger plastic components, while the Plymouth plant continued its work in specialty high-precision molded components.

By 1981, Pixley-Richards' major customers included Texas Instruments, IBM, Western Electric, Sperry, Honeywell, and Digital Equipment. The Plymouth plant employed 185 people, and the Tempe plant 150. The company's fiscal 1981 revenues were $13 million, with revenue coming about equally from each operation.

Plastics Molding

Pixley-Richards' major business was in plastics molding of small, precision components for products in the electronics industry.

All plastics, whether for a telephone handset, or a kitchen counter top, fall into one of two categories - thermoplastic or thermoset. As the name implies, a thermoplastic material is one formed by heating and melting the raw material and subsequently cooling it into its final shape, much in the same manner as cast iron is melted and poured into a mold to cool. The thermoset process differs in that it is the co-joining of two chemicals which, when mixed and heated, react chemically with each other to create a cross-linked molecular cohesion. Epoxy glue is an example of this thermoset process.

Molding of thermoplastics involves heating and melting the thermoplastic material in a barrel. When the material is melted, a piston forces the liquid into a mold at very high pressure. The mold, being refrigerated, cools the material to a solid mass in whatever shape is desired, and within seconds the mold can be opened and a finished product ejected. Thermoplastics can be re-melted and re-molded, thereby minimizing the costs of scrap materials. Soft drink bottles, eyeglasses and vinyl seatcovers were examples of thermoplastic products.

Molding of thermosets differs only in that the plastic material is forced into the mold at a temperature lower than that in the mold, at which point a short "cooking" process cross-links and "sets" the material in its final shape. Once that cross-linking has taken place, however, the material cannot be recycled, giving it the advantage of being used in its final application at temperatures higher than that at which it was molded. Saucepan handles and "Formica" countertops were examples of thermoset products.

Pixley-Richards had invested heavily in automated process controls, robotics programmed to remove complicated pieces, and other equipment designed to monitor the precision and quality of the molding process (see Exhibit 1 for examples of the company's machinery and components molded at Pixley-Richards). Mr. Joseph Callahan, manufacturing manager at Pixley-Richards, noted that "we produce parts that must consistently meet tolerances (i.e., the allowable deviation from a specified standard) as close as plus or minus a thousandth of an inch. That means making our machinery do precisely what we want it to in order to ensure consistent reproduction of a given component."

The Plymouth facility specialized in the injection molding of thermoset materials for component parts. (The Tempe facility only worked with thermoplastics.) Plymouth also performed injection molding of thermoplastic materials, including work with a number of so-called "exotic" plastics that were difficult to mold to consistent dimensions. At Plymouth, there were usually about sixty jobs per month for about twelve different customers. Approximately 60% of the jobs involved thermoset materials, and about 40% involved thermoplastics. Plymouth produced molded components in quantities ranging from a single unit for prototype development to as many as 500,000,000 units of a given component.

The owners and managers at Pixley-Richards believed that their company had achieved a reputation among a segment of the plastics industry as the "tough-job people." The owners, moreover, were proud of this reputation. Mr. Pixley commented, "We don't want to make plastic spoons. The jobs we take should continue to contribute to our knowledge, because that knowledge can later be used in some other portion of the plastics molding market. I believe that, if you're the best at what you do, a customer ultimately can't afford not to deal with you." Mr. Richards added, "Well, we might make plastic spoons if we could get our price. But our focus is on the high-precision, high-price segment of the market. We're selling our ability to do precision work consistently and our ability to solve the customer's problems with small plastic components. We don't have a product line: for any given job, we must provide what the customer wants to buy. We sell concepts concerning the components and the best way to produce them."

Business Development

Mr. Pixley and Mr. Richards initially saw an opportunity in thermoset molding of plastic components for the electronics industry. Top management and engineers at Pixley-Richards provided technical expertise to the customer's engineers and purchasing agents. "In the beginning," Mr. Pixley recalled, "our job was to sell our ability to handle the materials - that is, to demonstrate our technical expertise, provide reliable service, and offer competitive prices (which I've always felt goes hand-in-hand with good engineering). For a number of years, Peter and I rarely made cold calls. Once we had performed a good job for a big company, we got on its vendors' list and automatically began to receive their RFQs (Requests for Quotation). We never had a lot of customers, but our customers were growing and appreciated the work we did."

From the start, Pixley-Richards focused on large companies as potential customers for its molding service. One reason for this focus was that big companies were more likely to place high-volume orders than smaller electronics firms. Another reason, as Mr. Richards explained, was that "in my previous job, I dealt primarily with the big aircraft companies and I prefer to deal with big companies rather than with small companies. With big companies, a supplier is generally dealing with a system rather than with personalities. And once you learn the system within a big company, you can use that experience and track record to sell them other jobs."

By 1971, Pixley-Richards' Plymouth plant had a total of 42 customers accounting for total sales of $393,000. Of those sales, 76% were generated by the top ten accounts. By 1980, Plymouth had a total of 67 customers accounting for total sales of $7,139,000. Of those sales, 81% were generated by the top ten accounts. The top fifteen jobs accounted for one-third of 1980 sales. The major corporate customer purchased components through a number of its divisions. Each division made its purchases separately.

During the 1970s, the Plymouth plant became more involved with components for telecommunications equipment. As a result of work with several large customers, Plymouth made an R&D investment in order to develop engineering capabilities in areas such as staking,[1] insert molding,[2] and molding of certain "exotic" plastics. Insert molding and molding for "exotic" plastics were generally low-volume, customized jobs that commanded higher prices and margins. Staking jobs were generally large volume orders that generated more unit sales. Profits from staking, insert molding and molding of "exotic" plastics were cycled back into research and development aimed at producing specialized equipment to support these engineering capabilities.

Throughout the 1970s, and especially in the latter years of that decade, the company grew steadily. From 1976-1980, sales at Plymouth grew at a compound rate of 43% (see Exhibit 2). During the same period, the plant's gross profit margin increased from 16.1% to 21.2%. In 1980, jobs at Plymouth continued to be primarily with thermoset materials. Sales involving the specialized abilities in staking, insert molding and "exotic" plastics amounted to 70% of 1980 sales, with staking jobs the principal source of sales.

In 1981, sales at Plymouth declined for the first time in the company's history. A general recession, affecting the electronics industry as well as other sectors of the economy, was believed to be a major cause. In addition, some companies in the electronics industry, including Plymouth's largest customer, had publicly announced their intention to move away from purchase of discrete mechanical and electromechanical applications of certain equipment and toward development of electronic systems for these functions of their products. Certain types of relay switches, for example, were capable of being computerized. This development suggested the potential for a decreased level of demand for certain types of insert molding and bobbins.

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[1] "Staking" is a process in which, after a part is molded, a terminal is assembled into it. A "bobbin," or coil-form, is a part used for winding wire: wire wound about a bobbin can be enclosed with magnetic material and thus form a transformer package or a relay switch. A "staked-in bobbin," therefore, contained a terminal assembled into the bobbin.

Unlike Pixley-Richards, most molding shops did not have skills in staking as well. During the 1970s, moreover, Pixley-Richards developed a proprietary method of staking. By 1980, about 40% of Plymouth's business involved making staked-in bobbins and related objects.

[2] In "insert molding," a metal terminal was placed in the mold at the time of molding, and plastic was then molded around the metal terminal. Since insert molding involved working with two different materials, plastic and metal, the process demanded special skills and equipment.

Pixley-Richards was among the few molders in the United States capable of insert-molding. By 1980, insert-molding accounted for about 20% of the company's dollar sales.

Marketing Management and Organization

When the company was founded, Mr. Pixley concentrated on engineering while Mr. Richards was responsible for marketing and administration. For a number of years, Mr. Richards was the sole source of the company's marketing efforts, and customers dealt almost exclusively with Dave Pixley and Pete Richards throughout a contract with the company. Mr. Richards noted that, "from the customer's point of view, molded plastic components generally have low unit costs relative to other aspects of their product. For a number of years, my task was, first, to make people aware of our existence, then to make them aware of our skills and capabilities, to help in identifying areas where we could contribute profitably, and to get jobs for our expensive machinery."

The growth of Pixley-Richards' major customers meant that a large portion of the marketing effort, like much of the company's research and development, was devoted to account maintenance in order to develop the skills and services necessary for current accounts. This focus enabled the company achieve a good reputation in the area of customer relations. Purchasing agents and engineers regarded the company as technically expert, and typical comments from customer interviews included remarks such as: "One of Pixley-Richards' strengths is that they are responsive to problems and can be depended upon to make necessary corrections"; "They provide the type of service I like: someone who tells you about a problem either in advance or after they have solved it."

By 1981 Mr. Richards remained in charge of the company's marketing efforts but, in addition to Mr. Richards and Mr. Pixley, Mr. Charles Braxton was the chief contact for customers. Mr. Braxton was responsible for marketing, overseeing quality control, and most nonmanufacturing activities at the company. His duties included sales, purchasing, costing and pricing. Mr. Braxton was responsible for the company's two sales engineers and two customer service representatives.

Mr. Richards explained that "Dave Pixley and I are less involved in the daily activities. In marketing, Chuck prioritizes the RFQs we receive. In responding to the requests Chuck gets input from the people in sales about the customer and the job. If it's a job we want, we try to work together - sales, engineering, and customer service - in going after the job. If any questions or problems arise about an RFQ or a current job, we have a meeting and discuss the best approach."

The Customer Buying Process and Marketing Management

In the United States in 1981, most molding shops were small independently owned businesses employing from 2-10 people. Unlike Pixley-Richards, these small molding shops did not generally have skills in areas (e.g., staking, insert molding) other than molding. There were also a few large molding facilities that operated as separate divisions within some companies. Some of the larger customers for molded plastic components also operated in-house molding shops of significant size. These companies therefore had a make/buy option in their molded components sourcing decisions.

In procuring molded plastic components, a molder's potential customers made decisions at two stages in the process: decisions concerning the design and engineering of the component part and decisions about the appropriate source of supply.

Customers for molded plastic components first considered the design of their products and then the engineering requirements of the component. The decision makers at this stage were engineers from various functions and disciplines within the customer's company. Their decisions included the selection of materials (metals vs. plastics) and the materials supplier and the selection of the type of plastic to be used (thermoset vs. thermoplastic). With the aid of purchasing management, engineers also participated in the selection of a supplier for prototype work. Moreover, engineers frequently visited the facilities of potential prototype suppliers in order to examine design, manufacturing and testing procedures.

If the prototype was approved, the next set of decisions concerned sourcing the appropriate component parts. At this stage, the company's purchasing agent (often with recommendations from the engineering departments) selected from a vendor's list the plastic molders who would receive RFQs. In most cases, the molder who was involved in prototype work automatically received an RFQ, because the prototype molder generally knew numerous production and cost characteristics of the component. The supplier for actual production of the molded plastic component - who might or might not be the molder involved with the prototype - was also selected by purchasing management.

At Pixley-Richards, sales efforts were devoted primarily to getting the company involved as early and as fully as possible in the design and engineering phase of the customer's purchase decision. Mr. Richards explained that "we try to choose our customers. There are a few companies we contact regularly. We call upon their engineering departments and keep them up-to-date about the kinds of things we can do - that is, we show them parts that are representative of our engineering skills as applied to different kinds of molded plastic components. Our objective at that point is to get a request for a prototype of a component. We also want to stay informed about engineering developments in these companies." Mr. Braxton added that, "in general, we get orders in one of two ways. Either by talking with a company's engineers and exploring their problems and what might be done about those problems. Or by responding to a need identified by the engineering group of a company. We are probably more oriented to interactions with engineering, rather than going the sales-luncheon route with purchasing. With most customers for precision components, purchasing makes the final decision about suppliers for prototypes and, later, production. But engineering nearly always has lots of influence on those decisions."

Pixley-Richards also relied upon leads and referrals from its own vendors, especially its materials suppliers. In 1979, Mr. Braxton had initiated joint marketing arrangements with many of the company's vendors.

He explained that "joint marketing is really a more formal way of recognizing that our materials suppliers often talk to the same people at the same companies that we do. They want to sell their material for a particular application, and that means talking with the design and engineering people. We try to maintain frequent communication with our materials suppliers, because this lets us know about developments and generates leads - it's a form of market intelligence. It also helps to get us involved early in the customer's buying process and often at the initial design stage."

Involvement with the design and engineering of a component occurred after the initial customer contact by a sales engineer at Pixley-Richards. If this contact had uncovered a potentially attractive job, engineering at Pixley-Richards tried to analyze thoroughly the precise functions and requirements of the component in the customer's product, the life expectancy of the component, the viability of plastics and the appropriate plastic, as well as costs and production requirements. Mr. Callahan explained the company's involvement at this stage: "We go over the part dimension-by-dimension in order to understand what the customer is trying to accomplish and what aspects of the component are crucial for the customer's product. This, in turn, tells us how we might best use our machinery to do the job. So, as well as a technical discussion among engineers, it's also a negotiations process. Usually, having a plastic part molded is, for the customer, only a small portion of a larger project. Our customer's engineers generally don't need to know - and they don't know - as much about plastics molding as we do. Once we understand functionally what the part must accomplish, we can often specify what the important dimensions really are. This process sometimes means explaining to customers why some specified tolerances really don't need to be as close as they might have originally thought. And, just as often, we've located problems with a component that a customer had not recognized." Pixley-Richards' involvement in design and engineering frequently came from leads developed by its materials suppliers through its ties with current customers.

Pixley-Richards was also on the vendors' lists of many companies that sourced molded plastic components through outside vendors. Thus, Pixley-Richards was also informed about potential jobs through the regular RFQ process. When the company received RFQs, Mr. Braxton first ranked the potential jobs from "A" (high priority) to "D" (low priority). The criteria for this ranking were developed jointly among Messrs. Pixley, Richards, and Braxton. An important consideration in responding to an RFQ was what Mr. Richards called the "seriousness" of the job. Typically, RFQs sent to plastics molders quoted different possible levels of production. "Part of knowing this business," Mr. Richards explained, "is judging which level of production is likely to be the final and real volume of the job, given the component and the product it's meant for."

Mr. Braxton also noted the significance of a job's volume in citing a price in response to an RFQ. "The molding presses and tool-design capabilities are scarce resources. We must determine how the volume of a job compares with the amount of time it will probably demand on the molding machines and from tooling. I believe the first-year volume of a job should cover at least one-half the set-up costs in order to make the job feasible and attractive. Otherwise, we may squander our tooling and mold-design resources."

In addition to volume, the ultimate ranking of an RFQ involved other related considerations. According to Mr. Richards, "We also consider the technical aspects of the job. Does it fit with our capabilities and manufacturing processes? Also, will the technical skills and machinery involved lead to other jobs or other applications of those skills? Will it add significantly to our 'resume' of skills and components, so to speak? In addition, the ranking depends in part upon how hard a particular salesperson wants to work to get that job: each of our salespeople is responsible for his or her own quote, based upon rates - developed by me and Chuck - concerning machine time and labor costs."

In sales of precision components to the electronics industry, the issue of quality was especially crucial. Close examination of a supplier's quality control system was an important part of a visit from a potential customer's survey team. Industry observers agreed that, for a company of its size, Pixley-Richards had a good quality control system. Members of the company's quality control group checked hourly for any variances in the manufacturing processes. In addition, the company's investment in automated process controls allowed close monitoring of the molding process. Ian McCloud, chief engineer at Pixley-Richards, was recognized as an expert on process controls for the plastics industry.

As part of its sales efforts, Pixley-Richards advertised occasionally in plastics industry trade journals. The ads emphasized that "Precision plastic injection molding is our specialty," and listed additional "specialized services in the following areas: design and product critique; prototype molding and short-run molding; production tooling design and constructio insert molding, and specialized finishing of precision products; custom thermoset molding; custom electrical connectors and bobbin assemblies." The ads also emphasized the company's process technology and automated support equipment, and its ability "to manufacture better components at a lower price."

Subassemblies

The manufacturing of molded plastic components, Pixley-Richards' primary business, was one portion of a larger production process. A "subsystem," such as a tape drive for a computer, was made of "assembled parts" that were in turn made up of "components." The term "subassembly" generally referred to the assembling of component parts so that, in turn, these subassemblies could be used in a larger subsystem of the end product. In considering a significant move into subassembly work, therefore, Pixley-Richards was considering a move one step forward along the production chain: i.e., persuading companies to have Pixley-Richards mold the plastic components and coordinate and assemble the components into the appropriate subassemblies.

Most companies that purchased component parts from plastic molders or metal fabricators nevertheless performed the necessary subassembly work in-house. Often, this was because the assembled parts comprised a proprietary product.

For many component parts at some companies, however, subassembly work either was currently performed, or could be performed, by outside vendors of various kinds. There were three possible routes for outside subassembly work. First, if the majority of the component parts were plastic, then the plastics molder could also perform the subassembly work at the same location. Similarly, if the majority of component parts were metal, then the metal fabricator could also perform the subassembly work at the same location. Either route was often possible because, for many subassemblies, sophisticated skills and machinery were not necessary: hand tools, sufficient work space, and mechanical aptitude were the major requirements. If, however, the subassembly was especially complex or required special skills or equipment, a third route might be to send the component parts - whether originally manufactured by a plastics molder or a metal fabricator - to an assembler. This was often done for subassemblies that required sophisticated testing equipment (e.g., subassembly of printed circuit boards and the accompanying parts).

Mr. Pixley and Mr. Richards believed that many companies, currently performing subassembly work in-house, had not considered sending the subassemblies outside or had not been able to locate an appropriate vendor for subassembly work. The two men believed, moreover, that a number of factors might persuade a company to switch from in-house subassembly to outside subassembly through the molded parts manufacturer. The major reasons involved considerations concerning capacity utilization, manufacturing focus, and costs.

Some companies might send subassemblies outside in order to relieve capacity constraints. Typically, in a plant near capacity, the least critical operations were considered for outside sourcing. Due to the relative ease of training needed for a supplier to begin many types of subassembly operations, subassembly was an attractive candidate for outside sourcing.

In some growing companies, capacity constraints were among the prime factors behind their decisions to send subassembly outside. Some companies in cyclical industries, however, often sent subassemblies outside in order to maintain a constant level of production. In periods of cyclical upswing, a company might send subassemblies to vendors with the intention of reverting to in-house assembly if and when the level of demand fell.

Another factor promoting outside subassembly at some companies was the desire to maintain manufacturing focus. By having the relatively unsophisticated subassembly tasks performed outside, production management was free to focus on more critical aspects of operations, such as the state-of-the-art technology involved in a given product. At lower levels of the organization, moreover, outside subassembly helped to simplify the logistics tasks. By sourcing subassemblies outside, inspection, inventory, and materials-handling personnel could deal with one unit where previously they had been responsible for coordinating dozens or hundreds of component parts.

Cost factors might also influence a company's decision to have subassembly work performed by vendors. Due to overhead differentials, some large companies saved money through outside subassembly. If their plants were near capacity, these companies reduced costs by sourcing subassembly through smaller suppliers who had lower overhead and/or wage rates. In addition, some companies might not want to invest in specialized facilities for subassembly work, because the volume on a given subassembly was often low. An outside supplier, with a number of accounts that used similar subassemblies, could justify the investment because the volume was higher.

Subassembly Operations in Tempe

Pixley-Richards had some experience with subassemblies through its plant in Tempe, Arizona. During the 1970s the Tempe plant regularly made a number of components - the plastic base and two plastic gears - for a single product for one of its customers. In 1978 this customer, a large computer manufacturer, suggested that Pixley-Richards also perform the subassembly work on the components. Buzz Mosher, manager at Tempe, agreed. By 1981, the Tempe plant handled 8 different kinds of subassembly units for two companies. The units ranged in selling price from $1.08 to $39.77, and in number of parts from 4 to 102. In fiscal 1980, subassembly work accounted for about 12% of Tempe's sales, while tooling work accounted for about 29% and molding (including the molded parts used by the subassembly department) for about 59% of total sales at Tempe. In 1981, the Tempe organization began advertising, with one of its materials suppliers, for additional subassembly work (see Exhibit 3).

At Tempe, the molding department sold parts to subassembly at market prices, earning a gross profit margin that depended upon the specific customer and the competitive dynamics of the job. The molded parts were not marked up further by the subassembly department. Subassembly also purchased some component parts from outside vendors, and some raw materials from materials suppliers. Although the varied nature of subassembly work made generalizations difficult, the limited experience at Tempe suggested that the cost of goods sold for subassemblies amounted to 76% of subassembly sales revenue. (In comparison, the cost of goods sold for molding amounted to 79% of Plymouth's sales revenue.) SG&A expenses accounted for another 12% of subassembly sales. In addition, a study of Tempe's experience indicated the following about the subassembly business and some of its manufacturing requirements:

o Inventory: Because subassembly raw materials were a larger percentage of subassembly costs than raw plastic was for molding costs, subassemblies accounted for 12% of Tempe's sales and 28% of its inventory. Average inventory levels were 15% of total subassembly sales, compared to 4% for molding sales. There were more types of parts to be held in inventory for subassemblies than there were types of plastics for molding. Moreover, a purchased part could generally be used solely for specific types of subassemblies whereas purchased plastics could generally be used for several different molding jobs.

o Production/Engineering: Tempe had found that most subassembly work, although relatively unsophisticaed in technical and engineering terms when compared with molding, did require constant attention to detail and mechanical skills with standard hand tools. At Tempe, therefore, the most skilled employees in staking work (which involved a great deal of "hand-to-part" engineering in order to place the terminals in the mold) were moved into subassembly work. At Plymouth, much of the staking work had been automated and, while it still involved some manual work, staking at Plymouth was markedly different from subassembly in its current form at Tempe.

Most subassemblies at Tempe, moveover, required thermoplastic molding rather than thermoset. In addition, because customers generally preferred one location for subassembly operations, Tempe had to perform other secondary operations such as sonic welding, hot stamping, gluing, and painting.

o Capital Investments: Because subassembly work required a larger inventory and constant concentration by the individual workers, the Tempe organization had separated subassemblies from other work in the plant. A similar arrangement at Plymouth would require construction of additional floor space. If Plymouth's subassembly volume were to match the size of Tempe's, moreover, additional fixed capital investments would include an inventory facility, additional molding equipment, and some specialized equipment (primarily for finishing operations). The estimated total capital investment was $225,000. This figure included inventory, accounts receivable, $20,000 in fixed assets, and net working capital requirements of $185,000.

Subassembly Buying Process and Market Requirements

The marketing requirements of the subassembly business were less clear. For the most part, the Tempe plant's participation in subassemblies was due to the initiative of certain customers rather than to active selling by Pixley-Richards. The purchasing of subassemblies seemed to entail the same basic steps for potential customers as the purchasing of component parts did. But the nature of the subassembly purchase decision was more complex than in molding, and involved different buyers and possibly a different buying group within a company. Mr. Pixley and Mr. Richards believed that a company's decision about subassemblies involved three phases: product design and component engineering, the sourcing decision about the assembly of component parts, and the selection of a supplier for assembly.

At the design and engineering phase, the decision-making process for subassemblies and component parts was the same. The decision makers were engineers from various functions within the customer's company. Their decisions included the design of the end product, the selection of materials (metals vs. plastics) and a materials supplier, and the selection of the type of metal or plastic to be used.

The sourcing decision for subassemblies, however, was more complex than for component parts. First, Mr. Pixley and Mr. Richards believed many companies had not investigated the possibility of sourcing subassemblies outside. Secondly, the make/buy decision necessarily loomed larger in subassemblies, since there were more companies capable of in-house assembly than there were companies with significant in-house molding facilities. Thirdly, the decision makers for the make/buy decision on subassembly sourcin were unclear, and seemed to vary among different companies and even among different divisions within the same company. The people involved in deciding about the sourcing of molded components also influenced the make/buy decision on subassembly, but, depending upon the company, the additional decision makers might include (in addition to engineering) the plant manager, the project manager, quality control, or the purchasing department. A few companies seemed to have in place a separate subassembly buying group within the purchasing department, and other companies assigned responsibility for subassembly to the materials group representing the largest percentage of components or the most critical parts. Even with many of Pixley-Richards' current customers, an effort to acquire more subassembly work seemed to require developing contacts with new buyers and engineers.

If a company did decide to have the component parts assembled outside, the purchasing department appeared to have the primary responsibility for choosing a supplier. Purchasing decided what type of supplier to quote: plastics molder, metals fabricator, or an assembly house. The decision might be based on the "logical" supplier (i.e., the supplier who handled the molding of the base or frame for the subassembly), the percentage of plastic versus the percentage of metal parts, or the complexity of plastic component parts compared to metal component parts. The vendors' lists for molders and subassemblers were separate and different. Moreover, Tempe's experience suggested that, when many companies first considered outside subassembly, their purchasing departments probably did not have vendors' lists and thus contacted current or previous suppliers.

Finally, Tempe's experience also suggested that a supplier's location might play a greater role in subassembly work than it did in molding. Shipping costs for the component parts were one reason. In addition, however, subassemblies required more frequent communication between supplier and customer than components typically did. For the customer, a subassembly was a more visible and "important" job than the molding of a given component. Prompt delivery and coordination of the assembled component parts was crucial, and this aspect of service also made location a potential factor for a company choosing a subassembly vendor.

Conclusion

In considering whether their Plymouth plant should move into subassembly work, Mr. Pixley and Mr. Richards saw some potential benefits. Because customers generally preferred to keep their molding business for a particular subassembly with the same vendor, subassembly business at Plymouth might also increase the plant's molding business. At the Tempe plant, for example, \$1 of subassembly sales generated \$.66 of molding sales. Furthermore, Pixley-Richards might receive orders for subassemblies that involved primarily metal components; if so, the company might consider persuading the customer to switch from metal to plastic component parts, and thus increase molding business from another direction.

The owners also saw some risks and obstacles inherent in pursuing subassembly business for Plymouth. Because the subassembly vendor became more visible and more important to the customer, any difficulties with delivery of subassemblies might jeopardize the molding business with that customer. The Tempe plant had in fact received one of its subassembly jobs because the previous molder/assembler had difficulties coordinating the increased purchasing and delivery involved in subassemblies as compared to component parts.

The capital investments needed for Plymouth to enter the subassembl business included inventory financing, establishing assembly area work stations and construction of additional space, and purchase of some new machinery for finishing operations. These investments could make cash flow negative in the short term.

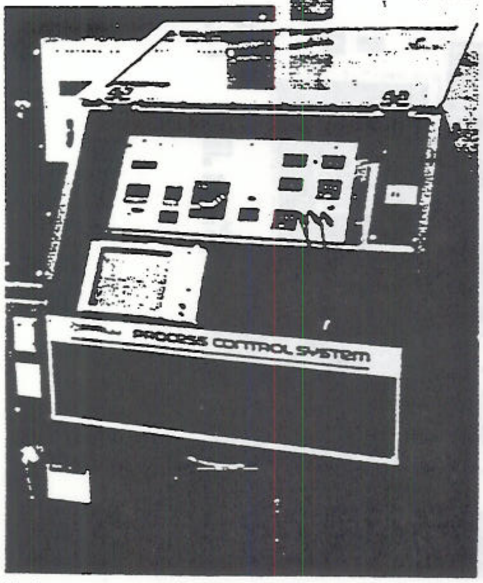
Because Pixley-Richards had borrowed a great deal to finance the research and development in staking and insert molding, the owners were very concerned about the return on assets that could be expected from subassembly work. Given Tempe's experience with subassemblies and assuming that Plymouth could generate \$710,000 in subassembly sales (i.e., 10% of the Plymouth plant's 1980 sales), a preliminary analysis indicated that the expected ROA from subassemblies might be lower than the plant's ROA from its molding business (currently 15.5%). This analysis charged the subassembly operation with the normal percentage of SG&A expenses (12%) as well as \$24,000 for new selling and administrative expenses, and it assumed that management could finance working capital at an annual interest rate of 20%.

DP

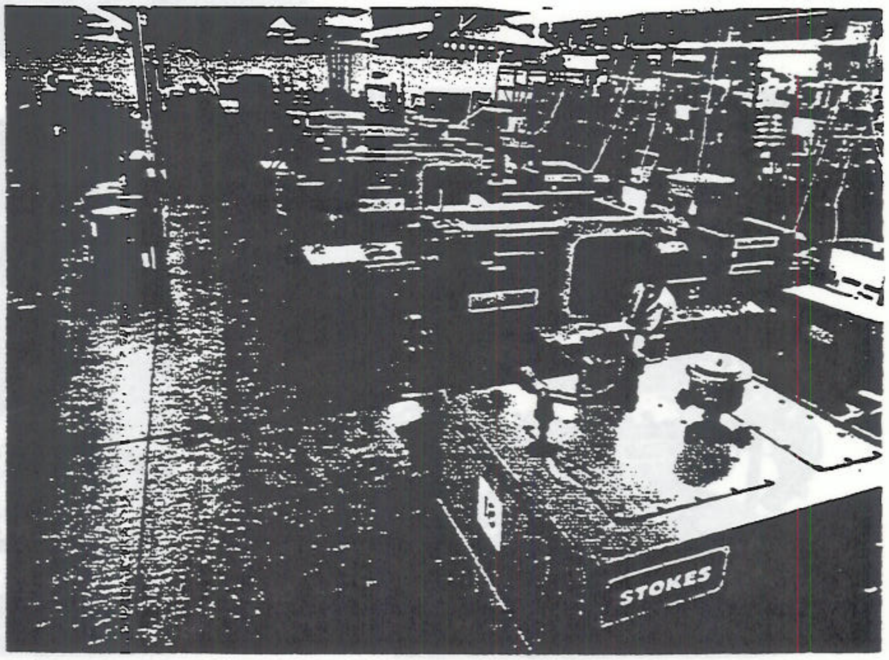
Exhibit 1

PIXLEY-RICHARDS, INC.

Torlon® component part after annealing to ensure stable physical properties.



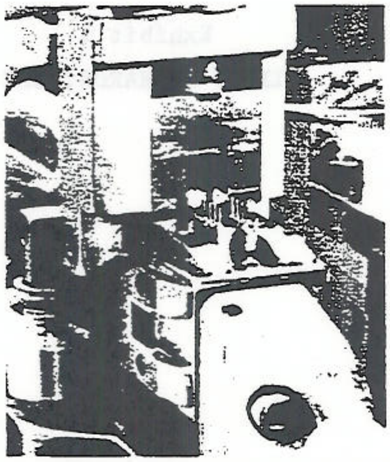
Hunkar process control peripherals stabilize and monitor the injection molding process.



Overview of the manufacturing floor at Tempe, Arizona, as products are molded and moved through the Production Control System.

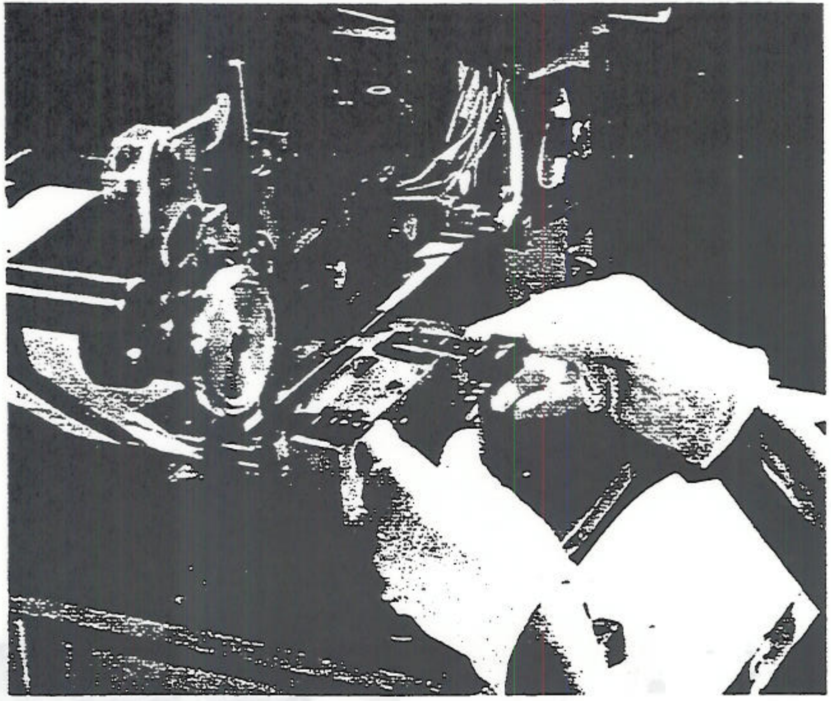
Exhibit 1 (continued)

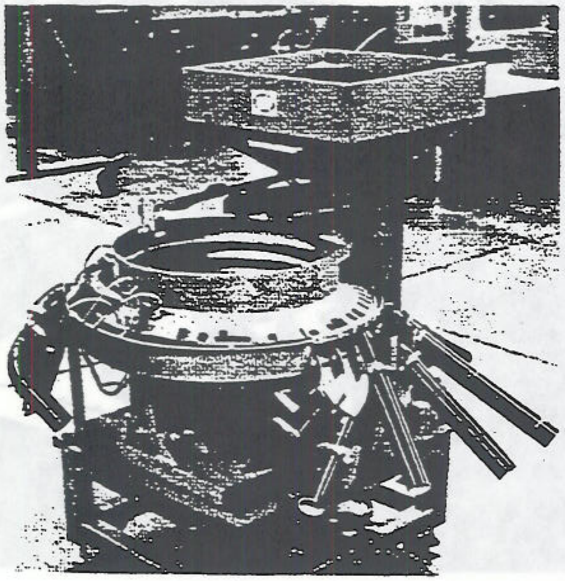
Ultrasonic insertion of metal sub-components completes a matrix printer carriage.



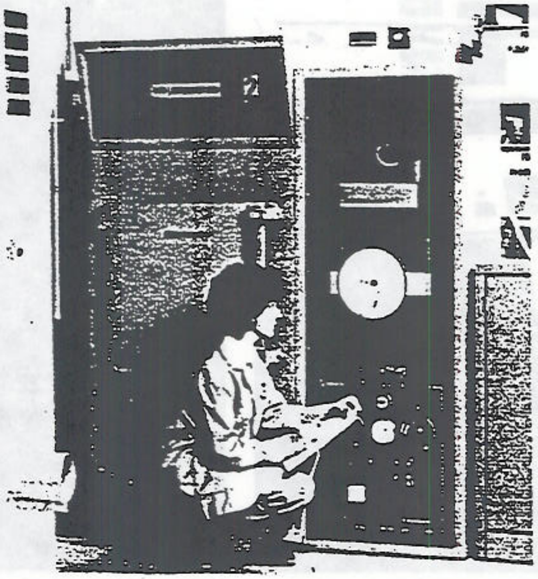
High volume, automated terminal insertion produces one of many spool and terminal plate assembly configurations.

Critical, high quality, multi-color hot stamping provi for an impressive aerospace instrument component.





Variable size connectors are sorted on an automatic vibrating sorter and are ready for shipment without manual handling.



Programmable curing ovens are on-line to ensure maximum properties of components.

Exhibit 2

PIXLEY-RICHARDS, INC.

Growth of Sales at Plymouth Plant

($000,000)

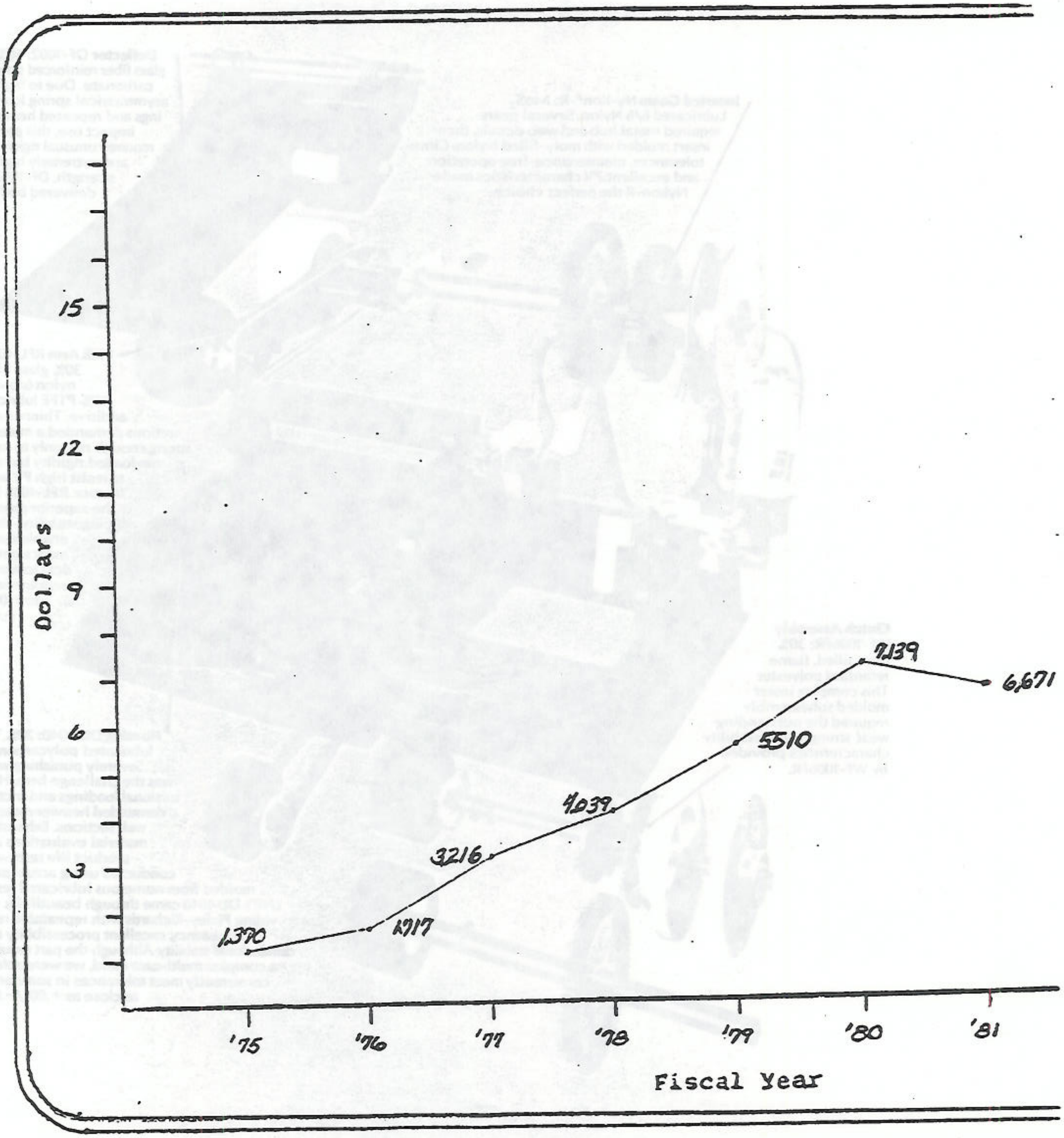
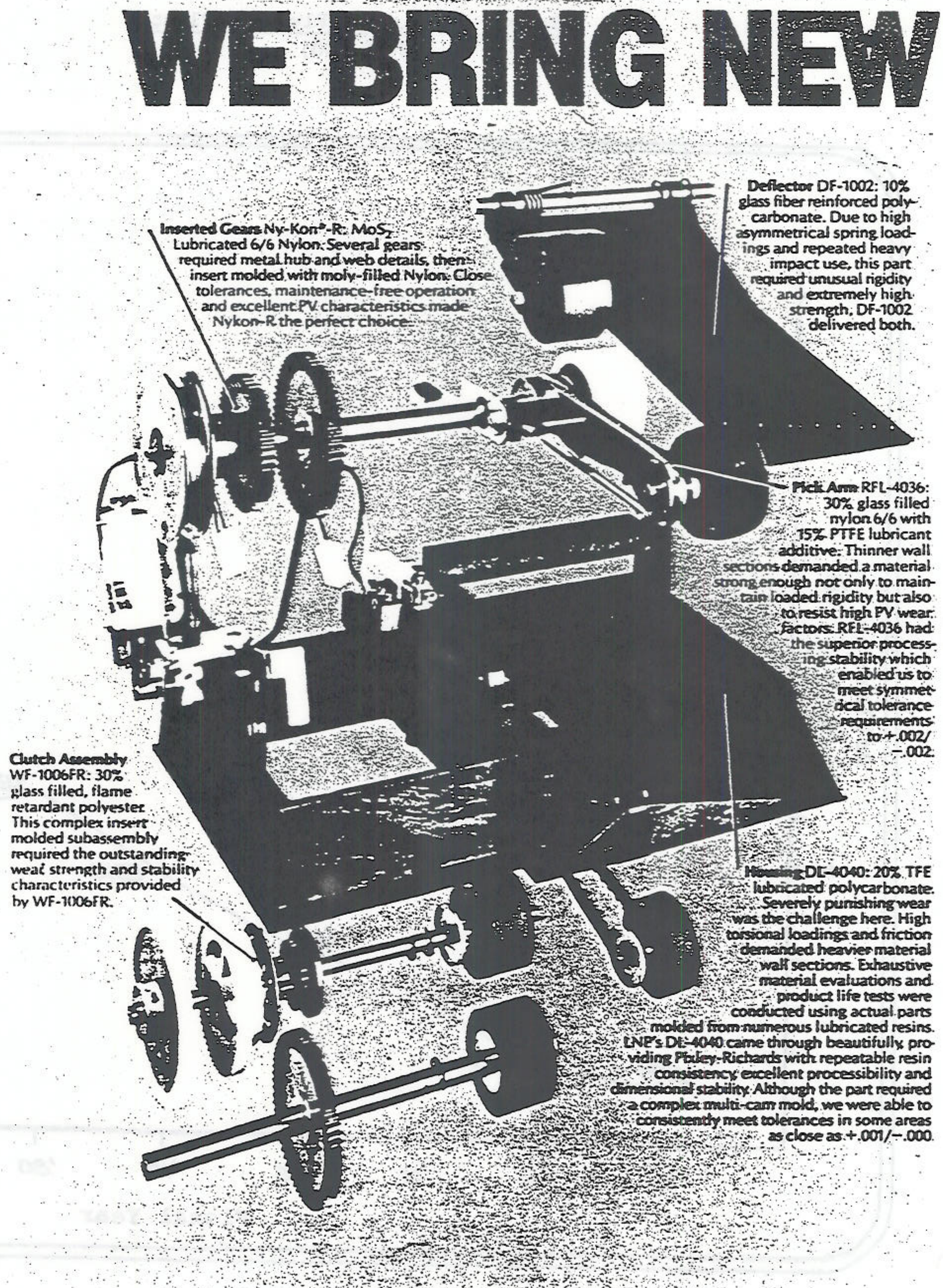


Exhibit 3

PIXLEY-RICHARDS, INC.



WE BRING NEW

Inserted Gears Ny-Kon®-R: MoS_2 Lubricated 6/6 Nylon. Several gears required metal hub and web details, then insert molded with moly-filled Nylon. Close tolerances, maintenance-free operation and excellent PV characteristics made Nykon-R the perfect choice.

Deflector DF-1002: 10% glass fiber reinforced polycarbonate. Due to high asymmetrical spring loadings and repeated heavy impact use, this part required unusual rigidity and extremely high strength. DF-1002 delivered both.

Pick Arm RFL-4036: 30% glass filled nylon 6/6 with 15% PTFE lubricant additive. Thinner wall sections demanded a material strong enough not only to maintain loaded rigidity but also to resist high PV wear factors. RFL-4036 had the superior processing stability which enabled us to meet symmetrical tolerance requirements to +.002/−.002.

Clutch Assembly WF-1006FR: 30% glass filled, flame retardant polyester. This complex insert molded subassembly required the outstanding wear strength and stability characteristics provided by WF-1006FR.

Housing DL-4040: 20% TFE lubricated polycarbonate. Severely punishing wear was the challenge here. High torsional loadings and friction demanded heavier material wall sections. Exhaustive material evaluations and product life tests were conducted using actual parts molded from numerous lubricated resins. LNP's DL-4040 came through beautifully, providing Pixley-Richards with repeatable resin consistency, excellent processibility and dimensional stability. Although the part required a complex multi-cam mold, we were able to consistently meet tolerances in some areas as close as +.001/−.000.

Reprinted from plastics design forum

Exhibit 3 (continued)

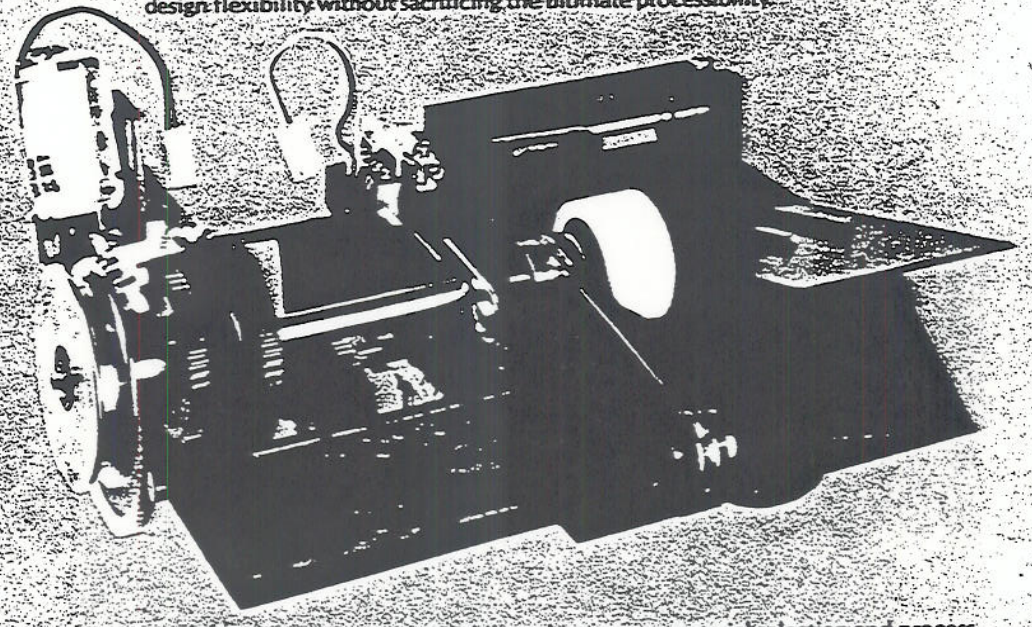
IDEAS TOGETHER.

The challenge wasn't merely to produce injection molded components for the complex business machine assembly you see on these pages.

The two-fold challenge was 1) to produce the components at minimal cost while maximizing reliability of the end product by reducing critical component wear and service requirements; and 2) to manufacture, assemble, test and deliver the completed sub-assembly, requiring 105 components, 73 assembly operations and 18 quality assurance checks.

A leading business machine manufacturer entrusted this complex program to Pixley-Richards, a Tempe, Arizona engineering-oriented custom molder. The assembly pictured here requires metal stampings, machined parts and several other manufactured components. The multiple plastic components use exclusively a wide range of LNP Thermocomp® resins supplied by LNP Corporation, Malvern, Pennsylvania.

The LNP Thermocomp® resin series offers to both the O.E.M. and processor the ability to take common engineering plastics and custom tailor their characteristics for performance on both ends. This broad range of formulations using glass or carbon fibers, conductive powders, PTFE, graphite, silicone or any number of other performance improving fillers and reinforcing agents offers design flexibility without sacrificing the ultimate processibility.



In the case of the major components in this product, proper material selection and processibility were critical to the success of the entire program. As it turned out, each is injection molded from a different LNP thermoplastic, and each performs beyond design specifications.

Next time you face a tough design, processing or manufacturing problem and need to bring a creative solution to your new ideas, use our approach. LNP and competent molders such as Pixley-Richards can help "BRING NEW IDEAS TOGETHER" for you.

PIXLEY RICHARDS

1505 West 17th Street
Tempe, Arizona 85281
602/967-8821

LNP

412 King Street
Malvern, PA 19355
215/644-5200

Contact the facility nearest you.

7

WHARTON REPROGRAPHICS

COORS2

"Southwestern Montana Coors" Case

The primary question presented in this case is whether Larry should apply for the southwestern Montana Coors beer distributorship. You and Larry will be aided in your decision by research performed by Manson and Associates. It is your task to decide a) what research Larry should order from Manson and Associates and b) whether he should apply for the distributorship.

The research reports available to you are described in Tables A through I. You must decide which data you need to do a good analysis. You may purchase any of the research studies for the costs indicated in the case, but under no circumstances spend more than $7500. Purchase research studies at the beginning of class using the attached Record Sheet (use one for the whole group). Any information purchased on an "emergency basis" (i.e. after 20 minutes from the time reports go on sale) will have to be purchased at the premium rate of twice the cost indicated in the case.

You will be given time in class to review the research information you purchase, prepare your analysis, and make a recommendation. Doing well here depends on the quality of your analysis and on the amount of marketing research information you purchased. (The less money you spend on research the better if your analysis is sound.)

The optimal strategy for purchasing marketing research information is to think ahead. Plan your analysis carefully before you come to class and then purchase just the information you need to conduct the analysis. This case parallels the "real world" where information is costly and time is short. You can save time in class with contingency planning — decide what you will do given different realistic research results. Then, when you receive the information you have decided to purchase, you will have thought through its implications for how to proceed.

"Southwestern Montana Coors" Case: Record Sheet

Names of group members: ______________________________

____

____

____

____

Ordered (check)	Table	Cost	Instructor's Initials
	A	$500.00	
	B	750.00	
	C	1000.00	
	D	500.00	
	E	400.00	
	F	25.00	
	G	4400.00	
	H	2400.00	
	I	1000.00	

TOTAL COST $__________

The Coors Distributorship

James E. Nelson

Larry Brownlow was just beginning to realize the problem was more complex than he thought. The problem, of course, was giving direction to Manson and Associates regarding which research should be completed by February 20, 1979, to determine market potential of a Coors beer distributorship for southwestern Montana. With data from this research, Larry would be able to estimate the feasibility of such an operation before the March 5 application deadline. Larry knew his decision on whether or not to apply for the distributorship was the most important career choice he had ever faced.

LARRY BROWNLOW

Larry was just completing his M.B.A. and, from his standpoint, the Coors announcement of expansion into Montana could hardly have been better timed. He had long ago decided the best opportunities and rewards were in smaller, self-owned businesses and not in the jungles of corporate giants.

Because of a family tragedy some three years ago, Larry found himself in a position to consider small business opportunities such as the Coors distributorship. Approximately $200,000 was held in trust for Larry, to be disbursed when he reached age thirty. Until then, Larry and his family lived on an annual trust income of about $18,000. It was on this income that Larry decided to leave his sales engineering job and return to graduate school for his M.B.A.

The decision to complete a graduate program and operate his own business had been easy to make. While he could have retired and lived off investment income, Larry knew such a life would not be to his liking. Working with people and the challenge of making it on his own, Larry thought, were far more preferable than enduring an early retirement.

Larry would be thirty in July, about the time money would actually be needed to start the business. In the meantime, he had access to about $7,500 for feasibility research. While there certainly were other places to spend the money, Larry and his wife agreed the opportunity to acquire the distributorship could not be overlooked.

COORS, INC.

Coors' history dated back to 1873, when Adolph Coors built a small brewery in Golden, Colorado. Since then, the brewery had prospered and becom the fifth-largest seller of beer in the country. Coors' operating philosophy could be summed up as "hard work, saving money, devotion to the quality of the product, caring about the environment, and giving people something to believe in."

Company operation was consistent with this philosophy. All facilities were still located in Golden, which was centrally located to the sixteen western states in which Coors was marketed. Coors was still family operated and controlled. The company had recently issued its first public stock, $127 million worth of nonvoting shares. The issue was enthusiastically received by the financial community despite its being offered at the bottom of the 1975 recession.

Coors' unwillingness to compromise on the high quality of its product was well known both to its suppliers and to its consuming public. Coors beer required constant refrigeration to maintain this quality, and wholesalers' facilities were closely controlled to ensure proper temperatures were maintained. Wholesalers were also required to install and use aluminum can recycling equipment. Coors was one of the first breweries in the industry to recycle its cans.

Larry was aware of Coors' popularity with consumers. From both personal experience and published articles, Coors consumers were characterized as almost fanatically brand-loyal despite the beer's premium price. As an example, ticket counter employees at the Denver airport regularly reported seeing out-of-state passengers carrying one or more cases of Coors on board for home consumption in non-Coors states. Local acceptance, Larry thought, would be no less enthusiastic.

Because of this high consumer acceptance, the Coors company spent less on advertising than competitors. Consumer demand seemed to pull the product through the distribution channel.

MANSON RESEARCH PROPOSAL

Because of the press of studies, Larry had contacted Manson and Associates in January for their assistance. The firm was a Spokane-based general research supplier that had conducted other feasibility studies in the Pacific Northwest.

Larry had met John Rome, senior research analyst for Manson, and discussed the Coors opportunity and appropriate research extensively in the January meeting. Rome promised a formal research proposal (*Exhibit 1*) for the project which Larry now held in his hand. It certainly was extensive, Larry thought, and reflected the professionalism he expected. Now came the hard part—choosing the more relevant research from the proposal because he certainly couldn't afford to pay for it all. Rome had suggested a meeting for Friday, which gave Larry only three more days to decide.

Larry was at first overwhelmed. All the research would certainly be useful. He was sure he needed estimates of sales and costs in a form allowing managerial analysis, but what data in what form? Knowledge of competing operations' experience, retailer support, and consumer acceptance also seemed crucial for feasibility analysis. For example, what if consumers were excited about Coors and retailers indifferent or the other way around? Finally, several of the studies would provide information also useful in later months of operation in the areas of promotion and pricing, for example. The problem now appeared more difficult than before!

It would have been nice, Larry thought, if he only had some time to perform part of the suggested research himself. There was just too much in the way of class assignments and other matters to allow him that luxury. Besides, using Manson and Associates would give him research from an unbiased source. There would be plenty for him to do once he received the results anyway.

INVESTING AND OPERATING DATA

Larry was not completely in the dark regarding investment and operating data for the distributorship. In the past two weeks he had visited two beer wholesalers in his hometown of Pullman, Washington, who handled Olympia and Hamms beer to get a feel for their operation and marketing experience. It would have been nice to interview a Coors wholesaler. but Coors management had strictly informed all their distributors to provide no information to prospective applicants.

While no specific financial data was discussed. general information had been provided in a cordial fashion because of the noncompetitive nature of Larry's plans. Based on his conversations. Larry had made the following estimates:

Inventory		$120.000
Equipment:		
Delivery trucks	$76.000	
Forklift	10.000	
Recycling and miscellaneous equipment	10.000	
Office equipment	4.000	
Total equipment		100.000
Warehouse		160.000
Land		20.000
Total investment		$400.000

A local banker had reviewed Larry's financial capabilities and saw no problem in extending a line of credit on the order of $200.000. Other family sources also might loan as much as $200.000 to the business.

As a rough estimate of fixed expenses. Larry planned on having four route salesmen. a secretary. and a general warehouse man. Salaries for these people and himself would run about $95.000 annually plus some form of incentive compensation he had yet to determine. Other fixed or semifixed expenses were estimated at:

Equipment depreciation	$20.00
Warehouse depreciation	8.00
Utilities and telephone	8.00
Insurance	6.00
Personal property taxes	5.00
Maintenance and janitorial	2.80
Miscellaneous	1.20
Total	$51.00

According to the two wholesalers. beer in bottle and cans outsold keg beer by a three-to-one margin Keg beer prices at the wholesale level were abou 45% of prices for beer in bottles and cans.

MEETING

The entire matter deserved much thought. Maybe was a golden opportunity. maybe not. The onl thing certain was that research was needed. Manso and Associates was ready. and Larry needed time t think. Today is Tuesday. Larry thought—only thre days until he and John Rome would get together f direction.

EXHIBIT 1
MANSON AND ASSOCIATES RESEARCH PROPOSAL

January 16. 1979

Mr. Larry Brownlow
1198 West Lamar
Pullman. WA 99163

Dear Larry:

It was a pleasure meeting you last week and discussing your business research interests in Coors wholesaling. From further thought and discussion with my colleagues. the Coors opportunity appears even more attractive than when we met.

Appearances can be deceiving. as you know. and I fully agree some formal research is needed before you make application. Research that we recommend would proceed in two distinct stages and is described below:

Stage One Research Based on Secondary Data and Manson Computer Models:

Study A: National and Montana per Capita Beer Consumption for 1978. 1979. 1980. 1981. and 1982.

Description: Per capita annual consumption of beer for the total population and population age twenty-one and over in gallons is provided.

Source: Various publications. Manson computer model

Cost: $500

Study B: Population Estimates for 1975–1985 for Five Montana Counties in Market Area
Description: Annual estimates of total population and population age twenty-o and over is provided for the period 1975–1985.
Source: U.S. Bureau of Census. Sales Management Annual Survey of Buying Power. Manson computer model
Cost: $750

Study C: Coors Market Share Estimates for 1980–1985.
Description: Coors market share for the five-county market area based on total gallons consumed is estimated for each year in the period 1980–1985. This data will be projected from Coors' experience in Idaho, Colorado, California, Oklahoma, and Texas.
Source: Various publications, Manson computer model
Cost: $1,000

Study D: Estimated Liquor and Beer Licenses for the Market Area 1980–1985.
Description: Projections of the number of on-premise sale operations and off-premise sale operations is provided.
Source: Montana Department of Revenue, Manson computer model
Cost: $500

Study E: Beer Taxes Paid by Montana Wholesalers for 1977 and 1978 in the Market Area.
Description: Beer taxes paid by each of the five presently operating competing beer wholesalers is provided. This can be converted to gallons sold by applying the state gallonage tax rate (10.5 cents per gallon).
Source: Montana Department of Revenue
Cost: $400

Study F: Financial Statement Summary of Wine, Liquor, and Beer Wholesalers for 1978.
Description: Composite balance sheets, income statements, and relevant measures of performance provided for 416 similar wholesaling operations is provided.
Source: Robert Morris Associates Annual Statement Studies, 1979 ed.
Cost: $25

Stage Two Research Based on Primary Data:

Study G: Consumer Study
Description: Study G involves focus group interviews and a mail questionnaire to determine consumer past experience, acceptance, and intention to buy Coors beer. Three focus group interviews would be conducted in three counties in the market area. From these data, a mail questionnaire would be developed and sent to 300 adult residents in the market area utilizing direct questions and a semantic differential scale to measure attitudes toward Coors beer, competing beers, and an ideal beer.
Source: Manson and Associates
Cost: $4,400

Study H: Retailer Study
Description: Group interviews would be conducted with six potential retailers of Coors beer in one county in the market area to determine their past beer sales and experience and their intention to stock and sell Coors. From these data, a mail questionnaire would be developed and sent to all appropriate retailers in the market area to determine similar data.
Source: Manson and Associates
Cost: $2,400

Study I: Survey of Retail and Wholesale Beer Prices
Description: Study I involves in-store interviews with a sample of fifteen retailers in the market area to determine retail and wholesale prices for Budweiser, Hamms, Michelob, Olympia, and a low-price beer.
Source: Manson and Associates
Cost: $1,000

Examples of the form of final report tables are attached [*Exhibit 2*]. This should give you a better idea of the data you will receive.

EXHIBIT 1 (*continued*)

As you can see, the research is extensive, and, I might add, not cheap. However, the research as outlined will supply you with sufficient information to make an estimate of the feasibility of a Coors distributorship, the investment for which is substantial.

I have scheduled 9:00 next Friday as a time to meet with you to discuss the proposal in more detail. Time is short, but we firmly feel the study can be completed by February 20, 1979. If you need more information in the meantime, please feel free to call.

Sincerely,

John Rome
Senior Research Analyst

EXHIBIT 2
EXAMPLES OF FINAL RESEARCH REPORT TABLES
TABLE A: NATIONAL AND MONTANA RESIDENT ANNUAL BEER CONSUMPTION, 1978–1982, GALLONS

	U.S. Consumption		**Montana Consumption**	
Year	**Based on Entire Population**	**Based on Population over Age 21**	**Based on Entire Population**	**Based on Population over Age 21**
1978				
1979				
1980				
1981				
1982				

Source: Study A.

TABLE B: POPULATION ESTIMATES FOR 1975–1985 FOR FIVE MONTANA COUNTIES IN MARKET AREA
Montana has no drinking age requirement.

County	1975	1977	1979	1981	1983	198
			Entire Population			
A						
B						
C						
D						
E						
			Population Age 21 and Over			
A						
B						
C						
D						
E						

Source: Study B.

EXHIBIT 2 (*continued*)

TABLE F: FINANCIAL STATEMENT SUMMARY FOR 416 WHOLESALERS OF WINE, LIQUOR, AND BEER IN 1978

Assets	Percentage	
Cash and equivalents		
Accounts and notes receivable net		
Inventory		
All other current		
Total current		
Fixed assets net		
Intangibles net		
All other noncurrent		
Total	100.00	*Ratios*
		Quick
		Current
		Debts/worth
Liabilities		
Notes payable—short term		Sales/receivables
Current maturity long-term debt		Cost sales/inventory
Accounts and notes payable—trade		Percentage profit before taxes based on total assets
Accrued expenses		
All other current		
Total current		
Long-term debt		
All other noncurrent		
Net worth		
Total liabilities and net worth	100.0	
Income Data		
Net sales	100.0	
Cost of sales		
Gross profit		
Operating expenses		
Operating profit		
All other expenses net		
Profit before taxes		

Note: Robert Morris Associates cannot emphasize too strongly that its figures may *not* be representative of the entire industry, for the following reasons:

1. The only companies with a chance of being included in Table F are those for whom their submitting banks have recent figures.
2. Even from this restricted group of potentially includable companies, those that are chosen, and the total number chosen, are not determined in any random or otherwise statistically reliable manner.
3. Many companies in Table F have varied product lines. Bankers have categorized them by their *primary* product line, and some "impurity" in the data will be introduced.

Thus the figures should be automatically considered as representative norms.

Source: Study F (Robert Morris Associates, © 1979).

TABLE C: COORS MARKET SHARE ESTIMATES FOR 1980–1985

Year	Market Share (%)
1980	
1981	
1982	
1983	
1984	
1985	

Source: Study C.

TABLE D: LIQUOR AND BEER LICENCE ESTIMATES FOR MARKET AREA FOR 1980–1985

Type of Licence	1980	1981	1982	1983	1984	1985
All beverages						
Retail beer and wine						
Off-premise beer only						
Veterans beer and liquor						
Fraternal						
Resort beer and liquor						

Source: Study D.

TABLE E: BEER TAXES PAID BY BEER WHOLESALERS IN THE MARKET AREA, 1977 AND 1978

Wholesaler	1977 Tax Paid	1978 Tax Paid
A		
B		
C		
D		
E		

Note: Montana beer tax is 10.5 cents a gallon.
Source: Study E.

TABLE G: CONSUMER QUESTIONNAIRE RESULTS, %

Consumed Coors in the past: ______Yes ______No

Attitudes toward Coors:

Strongly like	
Like	
Indifferent/no opinion	
Dislike	
Strongly dislike	
Total	100.0

Weekly beer consumption:

Less than 1 can	
1–2 cans	
3–4 cans	
5–6 cans	
7–8 cans	
9 cans and over	
Total	100.0

Intention to buy Coors:

Certainly will	
Maybe will	
Not sure	
Maybe will not	
Certainly will not	
Total	100.0

Usually buy beer at:

Liquor stores	
Taverns and bars	
Supermarkets	
Corner grocery	
Total	100.0

Features considered important when buying beer:

Taste	
Brand name	
Price	
Store location	
Advertising	
Carbonation	
Other	
Total	100.0

	Semantic Differential Scale[a]						
	Extremely	Very	Somewhat	Somewhat	Very	Extremely	
Masculine	_____	_____	_____	_____	_____	_____	Feminine
Healthful	_____	_____	_____	_____	_____	_____	Unhealthful
Cheap	_____	_____	_____	_____	_____	_____	Expensive
Strong	_____	_____	_____	_____	_____	_____	Weak
Old-fashioned	_____	_____	_____	_____	_____	_____	New
Upper-class	_____	_____	_____	_____	_____	_____	Lower-class
Good taste	_____	_____	_____	_____	_____	_____	Bad Taste

[a] Profiles would be provided for Coors, three competing beers, and an ideal beer.

Source: Study G.

Harvard Business School 575–060

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8
WASHINGTON REPROGRAPHICS

Southwest Airlines (A)

Assistant Professor Christopher H. Lovelock prepared this case as a basis for class discussion and not to illustrate either effective or ineffective handling of an administrative situation.

"Y'all buckle that seat belt," said the hostess over the public address system, "because we're fixin' to take off right now. Soon as we get up in the air, we want you to kick off your shoes, loosen your tie, an' let Southwest put a little love in your life on our way from Big D to Houston." The passengers settled back comfortably in their seats as the brightly-colored Boeing 737 taxied toward the takeoff point at Dallas's Love Field airport. Moments later, it was accelerating down the runway and then climbing steeply into the Texas sky on the 240-mile flight to Houston.

On the other side of Love Field across from the airport terminal, Southwest Airlines executives ignored the departing aircraft's noise, clearly audible in the company's modest but comfortable second-floor offices next to the North American–Rockwell hangar. They were about to begin an important meeting with representatives from their advertising agency to discuss alternative strategies in response to an announcement by their chief competitor, Braniff International Airways, that it was introducing a 60-day, half-price sale on Southwest's major route effective that same day, February 1, 1973.

Company Background

Southwest Airlines Co., a Texas corporation, was organized in March 1967. The founder, Rollin W. King, had graduated from the Harvard Business School in 1962 and was previously an investment counselor with a San Antonio firm. Since 1964, King, who held an airline transport pilot's license, had also been president of an air taxi service operating from San Antonio to various smaller south Texas communities.

During the mid-1960s, King and his associates became increasingly convinced that a need existed for improved air service between Houston, Dallas–Fort Worth, and San Antonio. These four cities

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were among the fastest growing in the nation. By 1968 Houston's standard metropolitan statistical area had a population of 1,867,000. Dallas's population was 1,459,000, San Antonio's 850,000, and Fort Worth's 680,000. Located 30 miles apart in northeastern Texas, Dallas and Fort Worth were frequently thought of as a single market area. Although each had its own airport—with Dallas's Love Field the busier of the two and the only one served by the airlines—construction had recently begun on the huge, new Dallas–Fort Worth Regional Airport, located midway between the two cities and intended to serve both.

Braniff International Airways and Texas International Airlines (TI) provided most of the air service between these markets. In 1967 Braniff operated a fleet of 69 jet and turboprop aircraft on an extensive route network, with a predominantly north-south emphasis, serving major U.S. cities, Mexico, and South America. Total Braniff revenues that year were $256 million, and the airline carried 5.6 million passengers. Texas International Airlines (then known as Trans-Texas Airways) was a regional carrier, serving southern and southwestern states and Mexico. In 1967 it operated a fleet of 45 jet, turboprop, and piston-engined aircraft on mostly short-haul routes, carrying 1.5 million passengers and generating total revenues of $32 million. Both Braniff and TI were headquartered in Texas.

Service by these two carriers within Texas represented legs of much longer, interstate flights; travelers flying from Dallas to San Antonio, for example, might find themselves boarding a Braniff flight that had just arrived from New York and was calling at Dallas on its way to San Antonio. In 1967 local travel between Dallas and Houston (the most important route) averaged 483 passengers daily in each direction, with Braniff holding 86% of this traffic (see *Exhibit 1*).[1] Looking back at the factors that had first stimulated his interest in developing a new airline to serve these markets, King recalled:

> The more we talked to people, the more we looked at figures of how big the market was and the more we realized the degree of consumer dissatisfaction with the services of existing carriers, the more apparent the opportunities became to us. We thought that these were substantial markets, and while they weren't nearly as large as the Los Angeles–San Francisco market, they had a lot in common with it. We knew the history of what PSA [Pacific Southwest Airlines] had been able to do in California with the same kind of service we were contemplating.[2]

On February 20, 1968, the Texas Aeronautics Commission granted a Certificate of Public Convenience and Necessity to Southwest, permitting it to provide intrastate air service between Dallas–Fort Worth, Houston, and San Antonio, a triangular route with each leg ranging in length from roughly 190 to 250 miles (see *Figure A*). Since the new airline proposed to confine its operations to Texas, its executives maintained that it did not need certification from the federal Civil Aeronautics Board (CAB).[3]

The next day, Braniff and TI asked the Texas courts to enjoin issuance of the Texas certificate. These two airlines already served the proposed routes and considered market demand insufficient to support another airline. The resulting litigation proved costly and time consuming, eventually reaching the U.S. Supreme Court. However, the suit was finally decided in Southwest's favor.

During the summer of 1970 M. Lamar Muse, an independent financial consultant, approached King. Muse had resigned the previous fall as president of Universal Airlines—a Detroit-based supplemental carrier—over a disagreement with the major stockholders on their planned purchase of Boeing 747 jumbo jets. Muse had read of Southwest's legal battles and told King and his fellow directors that he would like to help them transform the company from a piece of paper into an operating airline.

The wealth of experience that Muse could bring to the new airline was quickly recognized. Before assuming the presidency of Universal in September 1967, he had served for three years

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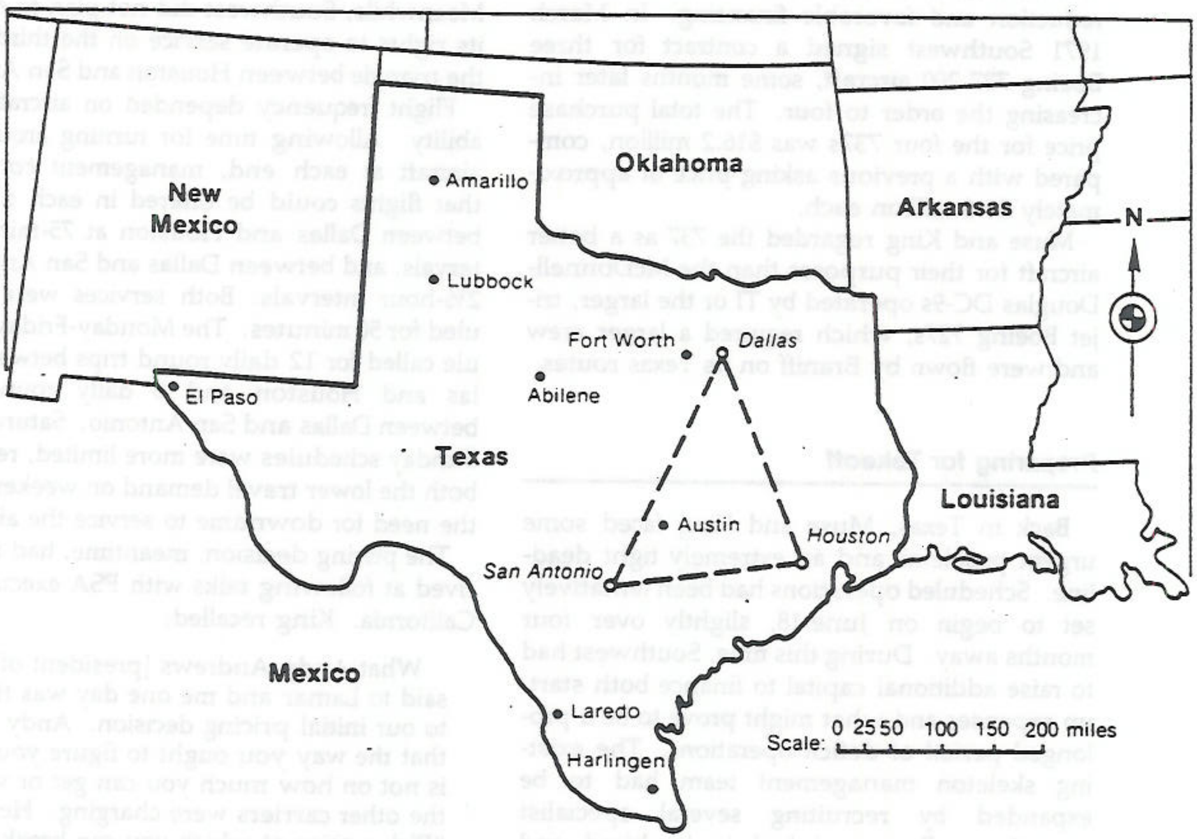
[1] Local travel figures excluded passengers traveling between these cities as part of a longer journey.

[2] PSA had built up a substantial market share on the lucrative Los Angeles–San Francisco route, as well as on other operations within California. Southwest executives subsequently carefully studied PSA when designing their operations.

[3] The Civil Aeronautics Board regulated all interstate airlines in matters such as fares and routes, but had no authority over airlines operating exclusively within a single state. (The CAB should not be confused with the Federal Aviation Administration [FAA], which regulated safety procedures and flight operations for all passenger airlines, including intrastate carriers.)

Figure A Southwest Airlines Route Map



as president of Central Airlines, a Dallas-based regional carrier. Before 1965 he had been secretary-treasurer of Trans-Texas Airways, assistant vice president–corporate planning of American Airlines, and vice president–finance of Southern Airways. After working informally with Southwest for a couple of months, Muse became a company employee in October 1970 and was elected president, treasurer, and a director on January 26, 1971. King was simultaneously named executive vice president of operations.

Muse explained one reason why he was attracted to Southwest:

> I felt the interstate carriers just weren't doing the job in this market. Every one of their flights was completely full—it was very difficult to get reservations. There were a lot of canceled flights; Dallas being Braniff's base and Houston TI's base, every time they had a mechanical problem it seemed like they always took it out on the Dallas-Houston service. From Dallas south to San Antonio and Houston is the tag end of Braniff's system, everything was turning around and going back north to Chicago or New York or wherever. There was so much interline traffic that most of the seats were occupied by those people. While Braniff had hourly service, there really weren't many seats available for local passengers. People just avoided flying in this market—they only went when they had to.

Muse added that Braniff's reputation for punctuality was so poor that many travelers popularly referred to it as the "World's Largest Unscheduled Airline."

Optimistic over the outcome of Southwest's legal battles, Muse and King spent many weeks on the West Coast in late 1970 and early 1971, prospecting for new aircraft. The airline industry was then in a recession, and aircraft purchasers were courted assiduously. Southwest initiated high-pressure negotiations with McDonnell-Douglas, Boeing, and several other airlines for the purchase of new or used jets.

Finally, the Boeing Company, having overproduced its Boeing 737 twin jet (in a speculative assessment of future orders that had failed to materialize), offered both a substantial price reduction and favorable financing. In March 1971 Southwest signed a contract for three Boeing 737-200 aircraft, some months later increasing the order to four. The total purchase price for the four 737s was $16.2 million, compared with a previous asking price of approximately $4.6 million each.

Muse and King regarded the 737 as a better aircraft for their purposes than the McDonnell-Douglas DC-9s operated by TI or the larger, tri-jet Boeing 727s, which required a larger crew and were flown by Braniff on its Texas routes.

Preparing for Takeoff

Back in Texas, Muse and King faced some urgent problems and an extremely tight deadline. Scheduled operations had been tentatively set to begin on June 18, slightly over four months away. During this time, Southwest had to raise additional capital to finance both start-up expenses and what might prove to be a prolonged period of deficit operations. The existing skeleton management team had to be expanded by recruiting several specialist executives. Personnel had to be hired and trained for both flight and ground operations. Meantime numerous marketing problems had to be resolved and an introductory advertising campaign developed to launch the new airline. Finally, Braniff and TI were pressing their legal battles to stifle Southwest.

The company's lawyers handled the legal matters while the Southwest executives moved quickly to confront financial, personnel, and marketing problems. The airline's financial position demanded immediate attention, since at year's end 1970 the company had a mere $183 in its bank account (see *Exhibit 2*). Between March and June 1971, Southwest raised almost $8 million selling convertible promissory notes and common stock.

Four executives with many years' airline experience soon filled vacancies on the management team. Three had previously worked for either Braniff or TI and had recently been fired by those carriers—a fact that Muse considered one of their strongest recommendations for employment with Southwest.

Decisions on route structure and schedules had already been made. Initially two of the three Boeing 737s would be placed in service on the busy Dallas-Houston run, and the third would fly between Dallas and San Antonio. Meanwhile, Southwest did not plan to exercise its rights to operate service on the third leg of the triangle between Houston and San Antonio.

Flight frequency depended on aircraft availability. Allowing time for turning around the aircraft at each end, management concluded that flights could be offered in each direction between Dallas and Houston at 75-minute intervals, and between Dallas and San Antonio at 2½-hour intervals. Both services were scheduled for 50 minutes. The Monday-Friday schedule called for 12 daily round trips between Dallas and Houston and 6 daily round trips between Dallas and San Antonio. Saturday and Sunday schedules were more limited, reflecting both the lower travel demand on weekends and the need for downtime to service the aircraft.

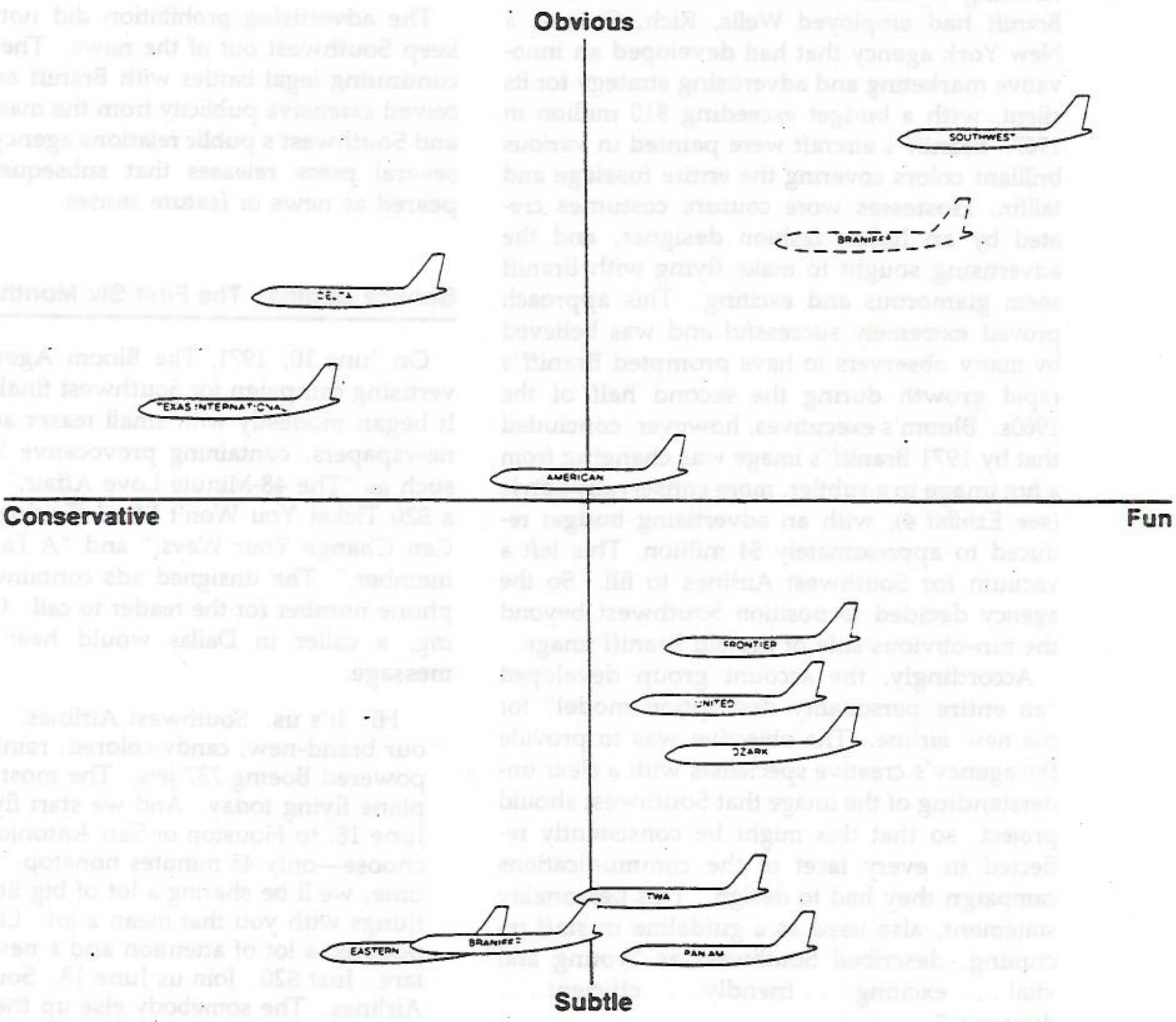
The pricing decision, meantime, had been arrived at following talks with PSA executives in California. King recalled:

> What Andy Andrews [president of PSA] said to Lamar and me one day was the key to our initial pricing decision. Andy told us that the way you ought to figure your price is not on how much you can get or what the other carriers were charging. He said, "Pick a price at which you can break even with a reasonable load factor, and a load factor that you have a reasonable expectation of being able to get within a given period of time, and that ought to be your price. It ought to be as low as you can get it without leading yourself down the primrose path and running out of money."

After estimating the money required for preoperating expenses and then carefully assessing both operating costs and market potential, Muse and King settled on a $20 fare for both routes, with a break-even point of 39 passengers per flight. In comparison, Braniff and TI coach fares were $27 on the Dallas-Houston run and $28 on the Dallas–San Antonio service. The two executives believed that an average of 39 passengers per flight was a reasonable expectation considering the market's growth potential and the frequency of flights Southwest planned to offer, although they projected a period of deficit operations before this break-even point was reached. They anticipated that while Braniff and TI might eventually reduce their fares, Southwest could expect an initial price advantage.

Early in 1971 Muse met with the vice presi-

Figure B Positioning Diagram of U.S. Airlines Advertising and Competing in Texas



Source: The Bloom Agency (February 11, 1971)

a. Former advertising by Wells, Rich, Greene ("The End of the Plain Plane," "The Air Strip").
b. Clinton E. Frank advertising, 1971.

dent of marketing, Dick Elliott, to select an advertising agency. (The airline already employed a public relations agency to handle publicity.) The Bloom Agency, a large regional advertising agency conveniently headquartered in Dallas, was awarded the account. The assignment was to come up with a complete communications program—other than publicity—within four months. "We've got no hostesses and no uniforms and no airplanes and no design and no money," Muse told the agency people, "but we're going to have an airline flying in 120 days!"

Bloom approached Southwest Airlines "as though it were a packaged goods account." The first task was to evaluate the characteristics of all U.S. carriers competing in the Texas markets. To simplify comparisons, a two-dimensional positioning diagram was prepared, rating each airline's image on conservative-fun and obvious-subtle scales (see *Figure B*). These judgments were based primarily on an analysis of recent airline advertising, to determine each carrier's image.

TI was immediately dismissed as dull and conservative, with a bland image. (*Exhibit* 3 shows typical TI advertisements at that time.) Braniff's advertising, however, presented an interesting stylistic contrast. From 1965 to 1968 Braniff had employed Wells, Rich, Greene, a New York agency that had developed an innovative marketing and advertising strategy for its client, with a budget exceeding $10 million in 1967. Braniff's aircraft were painted in various brilliant colors covering the entire fuselage and tailfin. Hostesses wore couture costumes created by an Italian fashion designer, and the advertising sought to make flying with Braniff seem glamorous and exciting. This approach proved extremely successful and was believed by many observers to have prompted Braniff's rapid growth during the second half of the 1960s. Bloom's executives, however, concluded that by 1971 Braniff's image was changing from a fun image to a subtler, more conservative style (see *Exhibit* 4), with an advertising budget reduced to approximately $4 million. This left a vacuum for Southwest Airlines to fill. So the agency decided to position Southwest beyond the fun-obvious side of the old Braniff image.

Accordingly, the account group developed "an entire personality description model" for the new airline. The objective was to provide the agency's creative specialists with a clear understanding of the image that Southwest should project, so that this might be consistently reflected in every facet of the communications campaign they had to design. This personality statement, also used as a guideline in staff recruiting, described Southwest as "young and vital . . . exciting . . . friendly . . . efficient . . . dynamic."

One constraint on marketing activities in the months before passenger operations was the planned issue of over $6 million of Southwest stock on June 8. The company's lawyers had advised that a media campaign promoting the airline before the stock issue might violate Securities and Exchange Commission regulations against promoting stock. Virtually the only advertising conducted before June 8, therefore, was for personnel.

Recruitment advertising in one area proved outstandingly effective, with over 1,200 young women responding to advertisements placed in national media for positions as Southwest air hostesses. Forty applicants were selected for training and although airline officials made no secret of the attractive looks of the successful candidates, it was also pointed out that their average scores on the required FAA proficiency test ranked among the highest of all U.S. carriers.

The advertising prohibition did not entirely keep Southwest out of the news. The airline's continuing legal battles with Braniff and TI received extensive publicity from the mass media, and Southwest's public relations agency put out several press releases that subsequently appeared as news or feature stories.

Service Begins: The First Six Months

On June 10, 1971, The Bloom Agency's advertising campaign for Southwest finally broke. It began modestly with small teaser ads in the newspapers, containing provocative headlines such as "The 48-Minute Love Affair," "At Last a $20 Ticket You Won't Mind Getting," "Love Can Change Your Ways," and "A Fare to Remember." The unsigned ads contained a telephone number for the reader to call. On phoning, a caller in Dallas would hear a taped message:

> Hi. It's us. Southwest Airlines. Us with our brand-new, candy-colored, rainbow-powered Boeing 737 jets. The most reliable plane flying today. And we start flying June 18, to Houston or San Antonio. You choose—only 45 minutes nonstop. In that time, we'll be sharing a lot of big little things with you that mean a lot. Like love potions, a lot of attention and a new low fare. Just $20. Join us June 18. Southwest Airlines. The somebody else up there who loves you.

Approximately 25,000 telephone calls resulted from these ads.

On Sunday, June 13, all newspapers in the three market areas ran a four-color double-truck[4] ad for Southwest (see centerspread). Daily, full-page newspaper ads appeared for the next two weeks in all markets highlighting the advantages Southwest Airlines offered the traveler—new aircraft, attractive hostesses, low fares, fast ticketing, and inexpensive, exotically-named drinks. TV advertising was also heavy and included 30-second spots featuring the Boeing 737, the hostesses, and what was re-

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[4] "Double-truck" is a printer's term that describes material printed across two full pages. A "half-truck" ad is printed across two half pages.

Table A Southwest Advertising and Promotional Expenditures. 1971 and 1972

	1971			*1972*
	Preoperating	*Operating*	*Total*	*(budgeted)*
Advertising				
Newspaper	$139,831	$131,675	$271,506	$60,518
Television	36,340	761	37,101	127,005
Radio	5,021	60,080	65,101	95,758
Billboards	26,537	11,670	38,207	90,376
Other publications	710	20,446	21,156	28,139
Production costs	52,484	43,483	95,967	83,272
Other promotion and publicity	29,694	27,200	56,894	48,366
	$290,617	$295,315	$585,932	$533,434

Source: Company records

ferred to as the "Love Machine" (see *Exhibit 5*). Whereas the competition used traditional, handwritten airline tickets, Southwest counter staff shortened ticket purchases, using a machine to print out tickets and a pedal-operated tape recorder to enter names on the passenger list as they checked in—both ideas were copied from PSA. Rounding out the advertising campaign were prominently displayed billboards at entrances to all three airports served by Southwest. Nearly half the year's promotional budget was spent in the first month of operations (see *Table A*).

Scheduled revenue operations were inaugurated in a blaze of publicity on Friday, June 18, but evidently the competition was not about to take matters lying down. In half-truck and full-page newspaper ads, Braniff and TI announced $20 fares on both routes. The CAB had disclaimed authority over intrastate fares and Texas law barred jurisdiction by TAC over carriers holding Federal Certificates of Public Convenience and Necessity; thus, the CAB carriers could charge any fare they wanted. Braniff's advertising stressed frequent, convenient service "every hour on the hour," hot and cold towels "to freshen up with," beverage discount coupons and "peace of mind" phone calls at the boarding gate; it also announced increased service between Dallas and San Antonio, effective July 1 (see *Exhibit 6*). TI, meantime, announced that on July 1 hourly service would begin on the Dallas-Houston route, leaving Dallas at 30 minutes past each hour. TI also introduced extras such as free beer, free newspapers, and $1 drinks on routes competing with Southwest (see *Exhibit 7*). Southwest countered with advertising headlined "The Other Airlines May Have Met Our Price But You Can't Buy Love."

Advertising and promotion continued regularly both on television and with frequent publicity events, usually featuring Southwest hostesses. A direct-mail campaign targeted 36,000 influential business executives in Southwest's service areas. Each received a personalized letter from Muse describing Southwest's service and enclosing a voucher worth half the cost of a round-trip ticket; about 1,700 vouchers were redeemed.

Surveys of Southwest's passengers departing from Houston revealed that a substantial percentage would have preferred using the William P. Hobby Airport, 12 miles southeast of downtown Houston, rather than the new Houston Intercontinental Airport, 26 miles north of the city. Accordingly, in mid-November, 7 of Southwest's 14 round-trip flights between Dallas and Houston were transferred to Hobby Airport, thus reopening this old airport to scheduled commercial passenger traffic. Additional schedule revisions made simultaneously included a reduction to four round-trips each weekday of the Dallas–San Antonio flights, inauguration of three daily round-trips on the third leg of the route triangle between Houston (Hobby) and San Antonio, and elimination of the extremely unprofitable Saturday flights on all routes. These actions contributed to increased transportation revenues in the final quarter of 1971 over those of the third quarter, but Southwest's operating losses in the fourth quarter fell only slightly, from $1,006,000 to $921,000 (see *Exhibit 8*). At year's end 1971, Southwest's accumulated deficit stood at $3.75 million (see *Exhibit 2*).

The Second Six Months

In February 1972, Southwest initiated a second phase of the advertising campaign, hired a new vice president of marketing, and scrapped its public relations agency. Meanwhile, the company recruited the agency's publicity director to fill a newly created position as public relations director at Southwest.

The objective was to sustain Southwest's presence in the marketplace after eight months of service. Frequent advertising, with a wide variety of messages, was directed at the regular business commuter. Surveys had shown that such travelers represented 89% of Southwest's traffic. The campaign made extensive use of TV advertising, featuring many of Southwest's hostesses.

Dick Elliott, whom the President described as having performed a herculean task in getting Southwest off the ground, had resigned to join a national advertising agency. The new vice president of marketing, Jess R. Coker, had spent 10 years in the outdoor advertising business after graduating from the University of Texas. His assignment before joining the airline had been as vice president of Southern Outdoor Markets, a company representing 85% of all outdoor advertising in the 14 southern and southeastern states. Coker assumed responsibility for all marketing functions of the airline, including advertising, sales, and public relations (see *Figure C*). He often met weekly with the account executive from The Bloom Agency to discuss not only media advertising but also numerous other details handled by the agency, including the preparation and execution of pocket timetables, point-of-sales materials for travel agents, and promotional brochures.

Although the majority of tickets were sold over the counter at the airport, sales were also made to travel agents and corporate accounts. Travel agents received a 7% commission on credit card sales and 10% on cash sales. Corporate accounts—companies whose personnel regularly used Southwest—received no discount, but benefited from the conveniences of a private supply of ticket stock that they issued themselves and a single monthly billing. Coker commanded a force of six sales representatives, whose job was to develop and service both travel agents and corporate accounts, encouraging maximum use of Southwest through distribution of point-of-sales materials, development of package arrangements, distribution of pocket timetables, and so forth. Sales representatives also promoted Southwest's air freight business, which featured a special rush delivery service for packages. Each representative, as well as most company officers, drove an AMC Gremlin car, strikingly painted in the color scheme of Southwest's aircraft.

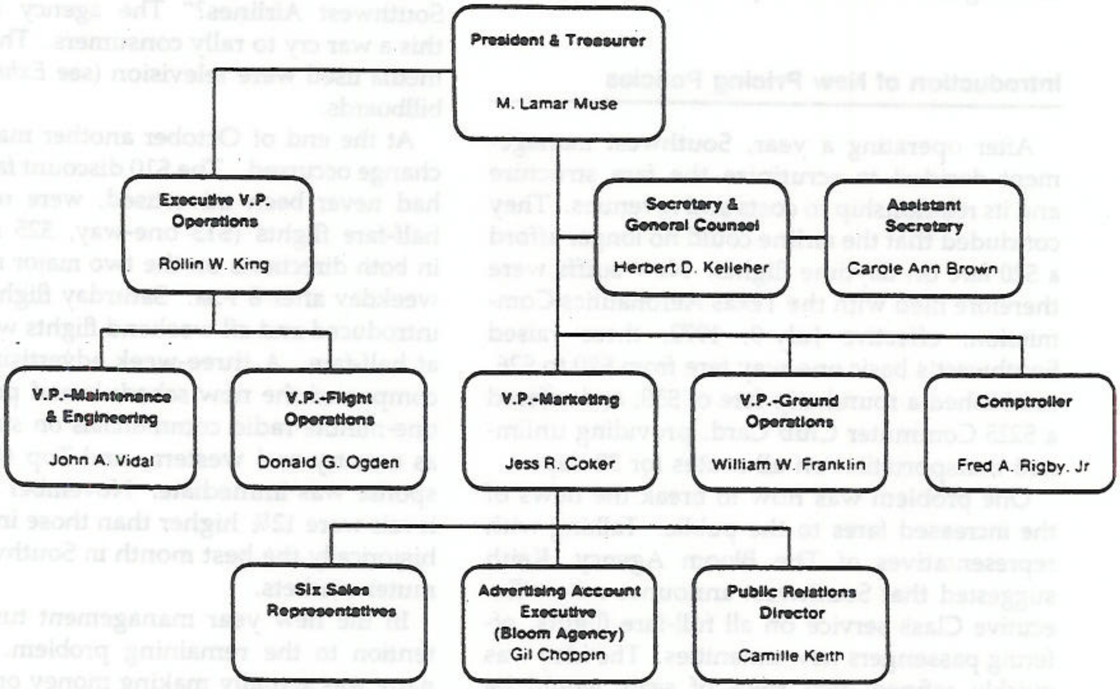
Southwest's new public relations director, Camille Keith, also reported to Coker. Keith was a former publicity director of Read-Poland, Inc., the public relations agency that had previously handled the airline's account. Keith's responsibilities focused on obtaining media coverage for the airline, and also included publication of Southwest's in-flight magazine and joint development of certain promotions with the advertising agency.

Between October 1971 and April 1972, average passenger loads systemwide increased from 18.4 passengers per flight to 26.7 passengers, still below the number necessary to cover the rising total costs per trip. The volume of traffic during the late morning and early afternoon could not support flights at hourly intervals. Conforming to Houston passenger preference, Southwest gradually shifted its operations to Hobby Airport and abandoned Houston Intercontinental.

On May 14, a new schedule reduced daily flights between Dallas and Houston from 29 to 22, primarily by curtailing service between 9:30 A.M. and 3:30 P.M. from once an hour to once every two hours. Eleven daily flights were still offered on the Dallas–San Antonio route and six between San Antonio and Houston, with some minor schedule changes. Hobby Airport was to be used exclusively for all flights to and from Houston. Braniff quickly retaliated by introducing service from Dallas to Hobby and undertaking an extensive publicity program promoting this move.

Financially, the new schedule allowed the company to sell its fourth Boeing 737. Experience had shown that the 737s could be turned around (i.e., loaded and unloaded) at the gate within 10 minutes. This meant that an hourly

Figure C Southwest Partial Organization Chart, 1972–1973


President & Treasurer
M. Lamar Muse
Executive V.P. Operations
Rollin W. King
Secretary & General Counsel
Herbert D. Kelleher
Assistant Secretary
Carole Ann Brown
V.P.-Maintenance & Engineering
John A. Vidal
V.P.-Flight Operations
Donald G. Ogden
V.P.-Marketing
Jess R. Coker
V.P.-Ground Operations
William W. Franklin
Comptroller
Fred A. Rigby, Jr
Six Sales Representatives
Advertising Account Executive (Bloom Agency)
Gil Choppin
Public Relations Director
Camille Keith

schedule on the Dallas-Houston run could be maintained with only two aircraft, instead of three. With the slack provided by the reduced midday frequencies and a schedule that involved periodically flying an aircraft around all three legs of the triangular routes, management concluded that three aircraft would suffice. By mid-1972, the airline industry had recovered from its 1970–1971 slump, and aircraft manufacturers had waiting lists for the popular models. Southwest found a ready buyer for its surplus 737 and made a profit of $533,000 on the sale. With this capital gain, lower operating costs, and a continued increase in revenues, net loss fell from $804,000 to $131,000 between the first and second quarters of 1972 (see *Exhibit* 3).

For some months Southwest had been experimenting with a $10 fare on Friday flights after 9:00 P.M. In May this reduced fare was extended to post-9:00 P.M. daily flights. These discount flights attracted more business than the standard-priced flights (see *Exhibit* 9).

In June 1972 Southwest Airlines celebrated its first birthday, giving Camille Keith an opportunity for more of the publicity stunts for which the airline was already famous. Posters were hung inside the aircraft and in the waiting lounges, the aircraft cabins were decorated, and an on-board party was held every day for a week, with birthday cake for the passengers and balloons for the children. This hoopla, promoted by newspaper advertising, generated considerable publicity for the airline and, in management's view, reinforced Southwest's image as the plucky, friendly little underdog that had survived an entire year against powerful, entrenched competition.

Not all public relations was just hoopla, Keith stressed, mentioning that she worked closely with the advertising agency to coordinate the airline's mass communication plan.

One example of a specialized promotional campaign involving inputs from both Keith and The Bloom Agency was the Southwest Sweetheart's Club. Using a mailing list, a direct-mail piece was sent to executive secretaries in Southwest's market area, offering them membership in this club. For each reservation on Southwest made for the boss, the secretary received a "sweetheart stamp," and for each 15 stamps, obtained a free ride on Southwest. Other bonuses for members included a twice-yearly drawing for a Mexico City vacation.

Introduction of New Pricing Policies

After operating a year, Southwest management decided to scrutinize the fare structure and its relationship to costs and revenues. They concluded that the airline could no longer afford a $20 fare on daytime flights. New tariffs were therefore filed with the Texas Aeronautics Commission, effective July 9, 1972; these raised Southwest's basic one-way fare from $20 to $26, established a round-trip fare of $50, and offered a $225 Commuter Club Card, providing unlimited transportation on all routes for 30 days.

One problem was how to break the news of the increased fares to the public. Talking with representatives of The Bloom Agency, Keith suggested that Southwest announce a new Executive Class service on all full-fare flights, offering passengers new amenities. The idea was quickly refined: two rows of seats would be removed from the aircraft, reducing capacity from 112 to 104 seats but increasing legroom; also, passengers would be offered free drinks. (The hostesses would probably not have time to serve more than two drinks per passenger on such short flights.) Full-page newspaper ads appeared proclaiming Southwest Airlines' new Executive Class service, with first-class legroom and free cocktails. The $26 fare also provided free security check charges that had been introduced the previous month.

The key consideration was the competition's reaction. "For a few days," admitted Coker, "we were really sweating." Braniff initially added another aircraft to its Dallas–Hobby Airport flights on July 11, thus offering on-the-hour service most of the business day. However, on July 17, TI increased its fares to match Southwest's; then on July 21 Braniff met all aspects of the fare and on-board service charges, also adding a $10 "Sundowner" flight to Hobby at 7:30 P.M. Braniff's increased service and the higher fares, as well as cutbacks in the number of Southwest flights, caused Southwest's July passenger count to fall on all three routes (see *Exhibit 10*). Overall, Southwest's patronage fell 2% in the third quarter of 1972, compared with the second quarter, but transportation revenues increased.

During September a third phase of the advertising campaign was launched, based on the slogan "Remember What It Was Like Before Southwest Airlines?" The agency considered this a war cry to rally consumers. The principal media used were television (see *Exhibit 11*) and billboards.

At the end of October another major pricing change occurred. The $10 discount fares, which had never been advertised, were replaced by half-fare flights ($13 one-way, $25 round-trip) in both directions on the two major routes each weekday after 8 P.M. Saturday flights were reintroduced and *all* weekend flights were offered at half-fare. A three-week advertising blitz accompanied the new schedule and prices, using one-minute radio commercials on such stations as country and western, and Top 40.[5] The response was immediate: November 1972 traffic levels were 12% higher than those in October—historically the best month in Southwest's commuter markets.

In the new year management turned its attention to the remaining problem. The company was actually making money on its Dallas-Houston flights, but incurring substantial losses in the Dallas–San Antonio market, where passenger volume was much lower (see *Exhibit 10*). Southwest offered only 8 flights a day on this route, versus 33 by its major competitor, and was averaging a mere 17 passengers on each full-fare flight. Southwest management concluded that unless patronage dramatically improved, this route would be discontinued. In a last attempt to obtain the needed increase, Southwest announced on January 22, 1973, a "60-Day-Half-Price-Sale" on *all* flights between Dallas and San Antonio. This sale was advertised on television and radio (see *Exhibit 12*). If successful, Muse intended to make this reduced fare permanent, but he believed that announcing it as a limited time offer would stimulate consumer interest more effectively and reduce the likelihood of competitive response.

The impact of these half-price fares was faster and more dramatic than the results of the evening and weekend half-price fares introduced the previous fall. As the first week ended, average loads on Southwest's Dallas–San Antonio service rose to 48 passengers per flight and continued to rise sharply as the next week began.

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[5] A "Top 40" station plays currently popular rock music recordings.

On Thursday, February 1, however, Braniff employed full-page newspaper ads to announce a half-price "Get Acquainted Sale" between Dallas and Hobby on all flights, until April 1 (see *Exhibit 13*).[6]

Muse called an urgent meeting of the management team, including King, the marketing vice president, the public relations director, the company's attorneys, and the account people from The Bloom Agency. Southwest had to decide how to respond to Braniff's move.

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[6] Braniff flights to Houston Intercontinental continued at the higher fare.

Exhibit 1 Southwest Airlines and Competitors: Average Daily Local Passengers Carried in Each Direction. Dallas-Houston Market

	Braniff[a]		*TI*[a]		*Southwest*		
	Passengers	*% of Market*	*Passengers*	*% of Market*	*Passengers*	*% of Market*	*Total Market—Passengers*
1967	416	86.1%	67	13.9%	–	–	483
1968	381	70.2	162	29.8	–	–	543
1969	427	75.4	139	24.6	–	–	566
1970							
1st half	449	79.0	119	21.0	–	–	568
2nd half	380	76.0	120	24.0	–	–	500
Year	414	77.5	120	22.5	–	–	534
1971							
1st half	402	74.7	126	23.4	10	1.9%	538
2nd half	338	50.7	120	18.0	209	31.3	667
Year	370	61.4	123	20.4	110	18.2	603
1972							
January	341	48.3	105	14.9	260	36.8	706
February	343	47.6	100	13.9	277	38.5	720
March	357	47.5	100	13.3	295	39.2	752
April	367	48.3	97	12.8	296	38.9	760
May	362	48.5	84	11.3	300	40.2	746
June	362	46.8	81	10.5	330	42.7	773
1st half	356	48.0	93	12.5	293	39.5	742
July	332	48.1	74	10.7	284	41.2	690
August	432	53.7	56	6.9	317	39.4	805
September	422	54.9	55	7.2	291	37.9	768
October	443	53.1	56	6.7	335	40.2	834
November	439	50.6	55	6.3	374	43.1	868
December	396	52.1	56	7.4	308	40.5	760
2nd half	411	52.1	59	7.5	318	40.4	788
Year	384	50.1	77	10.0	306	39.9	767
1973							
January[b]	443	51.5	62	7.3	354	41.2	859

Source: Company records

Note: Passenger figures should be doubled to yield market statistics for travel in both directions.

a. These figures were calculated by Muse from passenger data that Braniff and TI were required to supply to the Civil Aeronautics Board. He multiplied the original figures by a correction factor to eliminate interline traffic and arrive at net totals for local traffic.

b. Projected figures from terminal counts by Southwest personnel.

Exhibit 2 Southwest Airlines: Balance Sheet at December 31, 1972, 1971, and 1970

	1972	*1971*	*1970*
Assets			
Current assets			
Cash	$133,839	$231,530	$183
Certificates of deposit	1,250,000	2,850,000	–
Accounts receivable			
Trade	397,664	300,545	–
Interest	14,691	35,013	–
Other	67,086	32,569	100
Total accounts receivable	479,441	368,127	100
Less allowance for doubtful accounts	86,363	30,283	–
	393,078	337,844	100
Inventories of parts and supplies, at cost	154,121	171,665	–
Prepaid insurance and other	75,625	156,494	31
Total current assets	2,006,663	3,747,533	314
Property and equipment, at cost			
Boeing 737–200 jet aircraft	12,409,772	16,263,250	–
Support flight equipment	2,423,480	2,378,581	–
Ground equipment	346,377	313,072	9,249
	15,179,629	18,954,903	9,249
Less accumulated depreciation and overhaul allowance	2,521,646	1,096,177	–
	12,657,983	17,858,726	9,249
Deferred certification costs less amortization	371,095	477,122	530,136
Total assets	$15,035,741	$22,083,381	$539,699
Liabilities and Stockholders' Equity			
Current liabilities			
Notes payable to banks (secured)	$950,000	–	–
Accounts payable	124,890	$355,539	$30,819
Accrued salaries and wages	55,293	54,713	79,000
Other accrued liabilities	136,437	301,244	–
Long-term debt due within one year	1,226,457	1,500,000	–
Total current liabilities	2,493,077	2,211,496	109,819
Long-term debt due after one year			
7% convertible promissory notes	–	1,250,000	–
Conditional purchase agreements—Boeing Financial Corporation (1½% over prime rate)	11,942,056	16,803,645	–
	11,942,056	18,053,645	–
Less amounts due within one year	1,226,457	1,500,000	–
	10,715,599	16,553,645	–
Contingencies			
Stockholders' equity			
Common stock, $1.00 par value, 2,000,000 shares authorized, 1,108,758 issued (1,058,758 at 12/31/71)	1,108,758	1,058,758	372,404
Capital in excess of par value	6,062,105	6,012,105	57,476
Deficit	(5,343,798)	(3,752,623)	–
	1,827,065	3,318,240	429,880
Total liabilities	$15,035,741	$22,083,381	$539,699

Source: Southwest Airlines Co. annual reports 1971, 1972

Note: Notes to financial statement not shown here.

Exhibit 3 Examples of TI Newspaper Advertising. 1970–1971

if we listed all the 66 cities in the 9 states and mexico that we jet to it would take up this entire costly page. we'd rather spend the money getting you there on time.

Texas International
We run an intelligent airline.

---

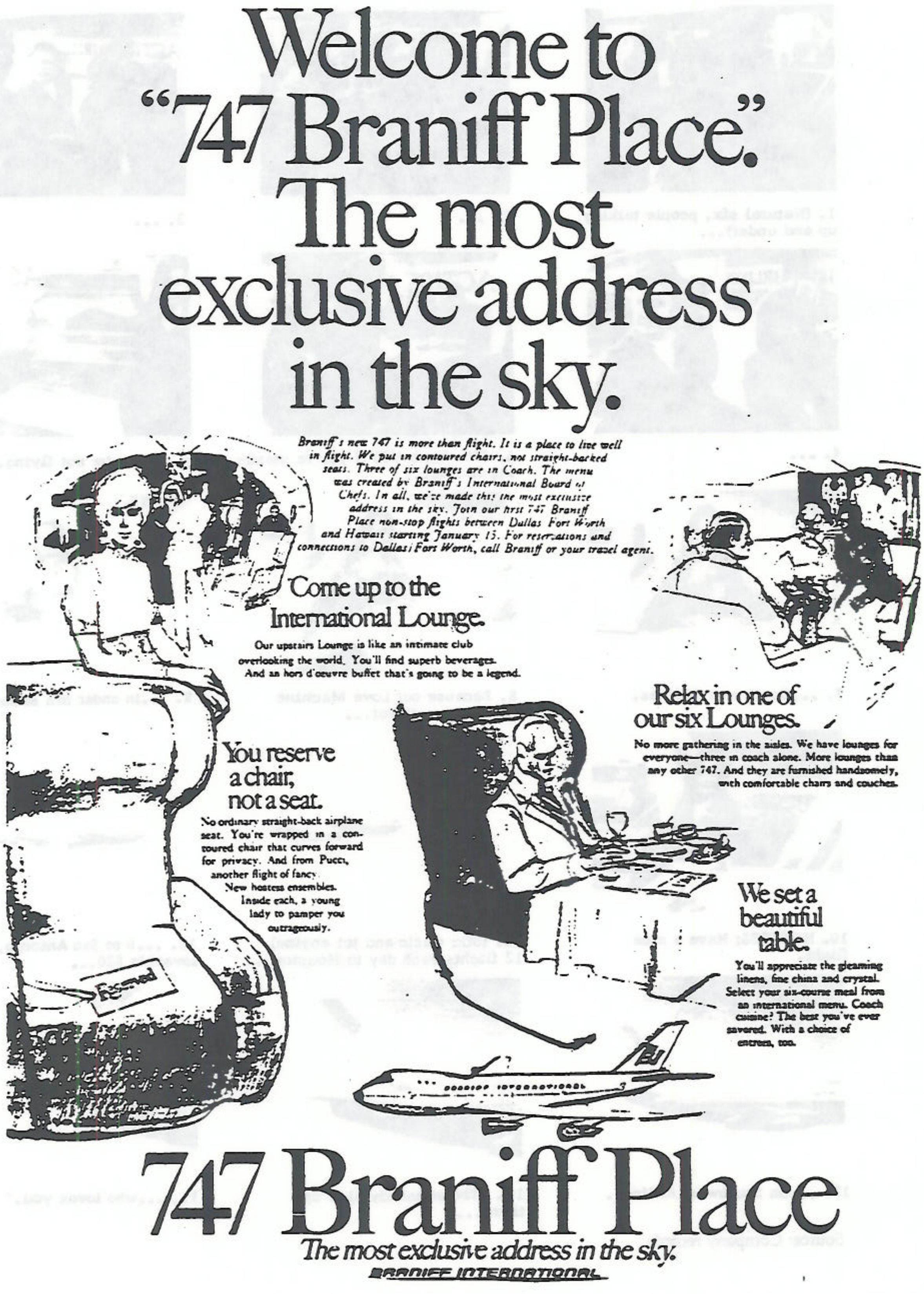
we don't run big expensive ads.

we run big expensive jets instead.

serving 9 states and mexico
Texas International
We run an intelligent airline.

Note: Reproductions same size as originals

Exhibit 4 Example of Clinton E. Frank Press Advertising for Braniff International, 1970



Welcome to "747 Braniff Place." The most exclusive address in the sky.

Braniff's new 747 is more than flight. It is a place to live well in flight. We put in contoured chairs, not straight-backed seats. Three of six lounges are in Coach. The menu was created by Braniff's International Board of Chefs. In all, we've made this the most exclusive address in the sky. Join our first 747 Braniff Place non-stop flights between Dallas/Fort Worth and Hawaii starting January 15. For reservations and connections to Dallas/Fort Worth, call Braniff or your travel agent.

Come up to the International Lounge.

Our upstairs Lounge is like an intimate club overlooking the world. You'll find superb beverages. And an hors d'oeuvre buffet that's going to be a legend.

Relax in one of our six Lounges.

No more gathering in the aisles. We have lounges for everyone—three in coach alone. More lounges than any other 747. And they are furnished handsomely, with comfortable chairs and couches.

You reserve a chair, not a seat.

No ordinary straight-back airplane seat. You're wrapped in a contoured chair that curves forward for privacy. And from Pucci, another flight of fancy. New hostess ensembles. Inside each, a young lady to pamper you outrageously.

We set a beautiful table.

You'll appreciate the gleaming linens, fine china and crystal. Select your six-course meal from an international menu. Coach cuisine? The best you've ever savored. With a choice of entrees, too.

747 Braniff Place

The most exclusive address in the sky.

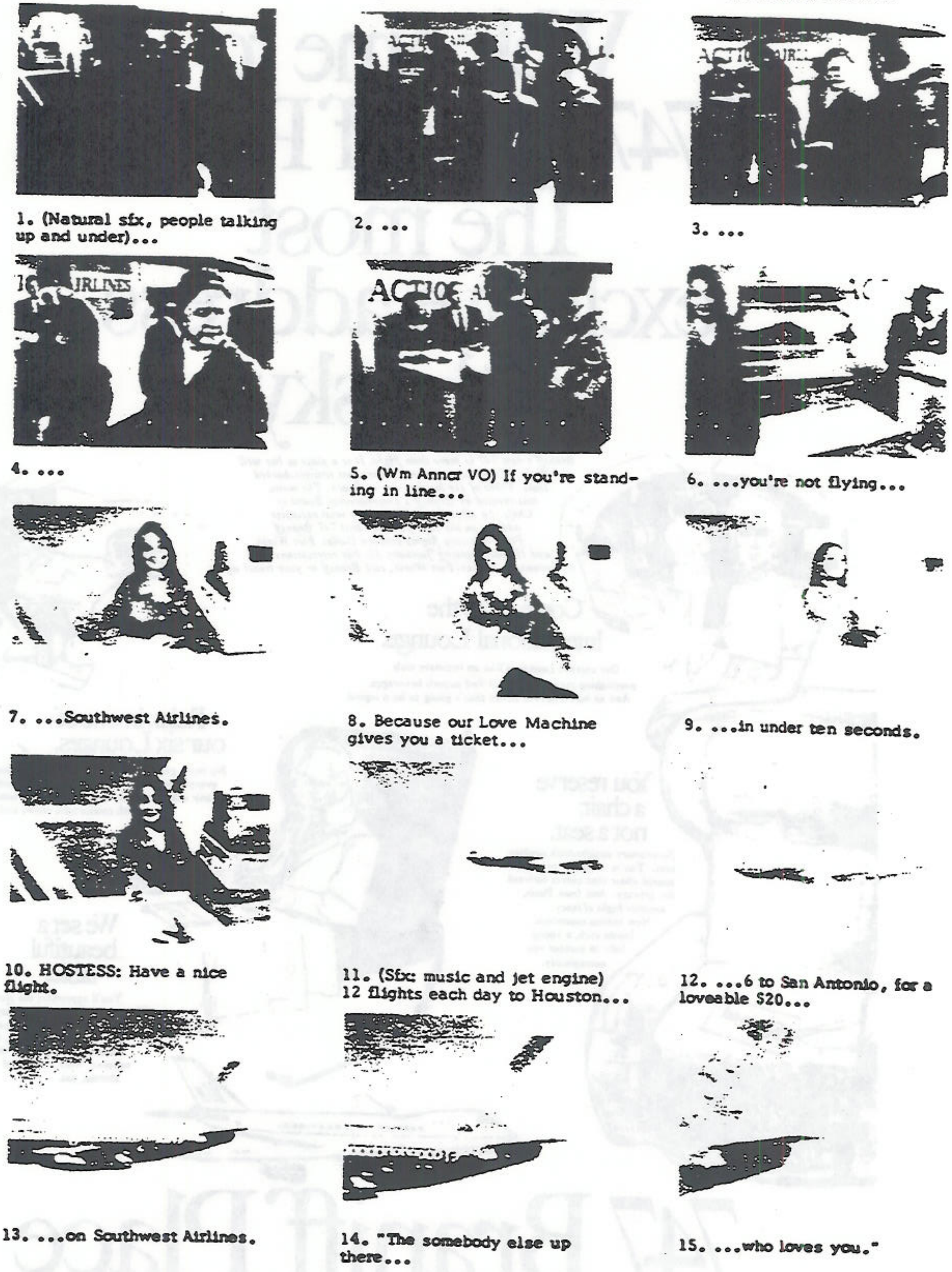
BRANIFF INTERNATIONAL

Exhibit 5 Southwest Airlines' Introductory TV Advertising, June 1971

SOUTHWEST AIRLINES

CODE NO: SWA-3-30-71
TITLE: "TV Love Machine"

TELEVISION STORYBOARD
THE BLOOM AGENCY



1. (Natural sfx, people talking up and under)...

2. ...

3. ...

4. ...

5. (Wm Anncr VO) If you're standing in line...

6. ...you're not flying...

7. ...Southwest Airlines.

8. Because our Love Machine gives you a ticket...

9. ...in under ten seconds.

10. HOSTESS: Have a nice flight.

11. (Sfx: music and jet engine) 12 flights each day to Houston...

12. ...6 to San Antonio, for a loveable $20...

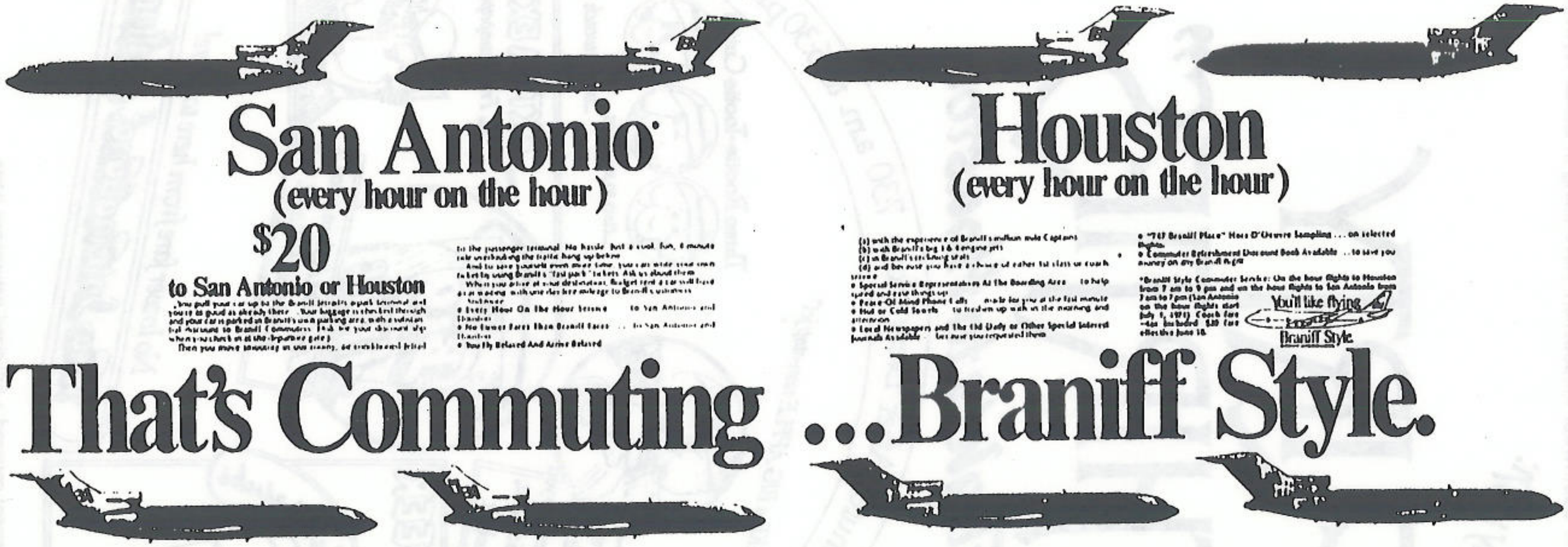
13. ...on Southwest Airlines.

14. "The somebody else up there...

15. ...who loves you."

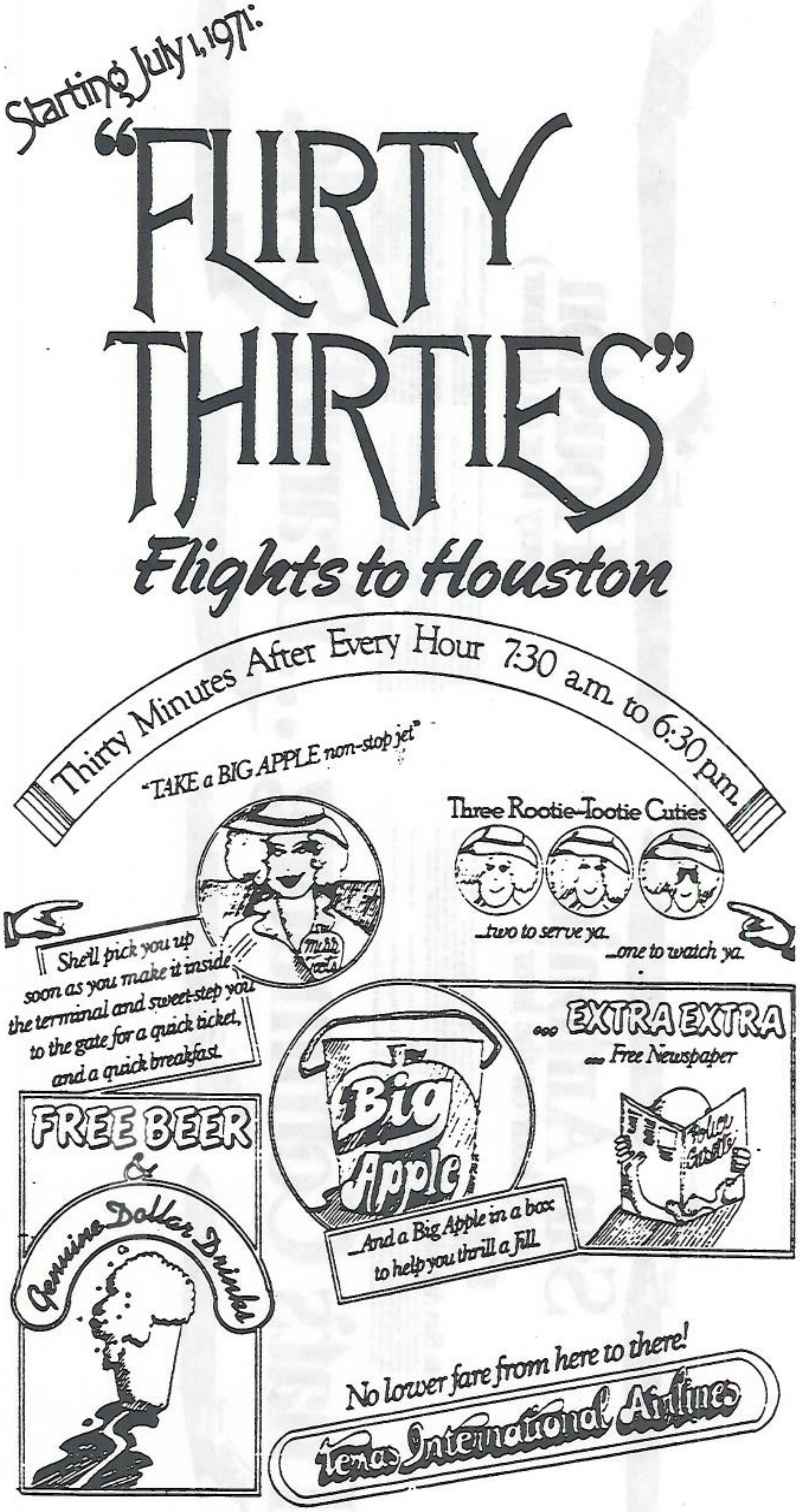
Source: Company records

Exhibit 6 Braniff 's Response to Southwest Introduction: Advertising in Dallas Newspapers, June 1971


San Antonio
(every hour on the hour)
$20
to San Antonio or Houston
Houston
(every hour on the hour)
You'll like flying
Braniff Style.
That's Commuting ...Braniff Style.

Prepared by: Clinton E. Frank, Inc.
Note: The original of this advertisement extended across the bottom half of two full newspaper pages.

Exhibit 7 TI Response to Southwest Introduction: Advertising in Dallas Newspapers, June 1971



Starting July 1, 1971:

"FLIRTY THIRTIES"

Flights to Houston

Thirty Minutes After Every Hour 7:30 a.m. to 6:30 p.m.

"TAKE a BIG APPLE non-stop jet"

Three Rootie-Tootie Cuties

...two to serve ya.

...one to watch ya.

She'll pick you up soon as you make it inside the terminal and sweet-step you to the gate for a quick ticket, and a quick breakfast.

... EXTRA EXTRA

... Free Newspaper

FREE BEER & Genuine Dollar Drinks

...And a Big Apple in a box to help you thrill a Fill.

No lower fare from here to there!

Texas International Airlines

Note: The original advertisement covered a full-sized newspaper page.

Exhibit 8 Southwest Airlines: Quarterly Income Statements

	1971		1972			
Income Statements ($000s)	Q3	Q4	Q1	Q2	Q3	Q4
Transportation revenues[a]	$887	$1,138	$1,273	$1,401	$1,493	$1,745
Operating expenses						
Operations and maintenance[b]	1,211	1,280	1,192	1,145	1,153	1,156
Marketing and general administration	371	368	334	366	313	351
Depreciation and amortization	311	411	333	334	335	335
Total	1,893	2,059	1,859	1,845	1,801	1,842
Operating profit (loss)	(1,006)	(921)	(586)	(444)	(308)	(97)
Net interest revenues (costs)	(254)	(253)	(218)	(220)	(194)	(204)
Net income (loss) before extraordinary items	(1,260)	(1,174)	(804)	(664)	(502)	(301)
Extraordinary items	(571)[c]	(469)[c]	–	533[d]	–	–
Net income (loss)	$(1,831)	$(1,643)	$(804)	$(131)	$(502)	$(301)

Source: Company records

a. Included both passenger and freight business.

b. Incremental costs per flight were $226 during the second half of 1971, $231 in the first half of 1972, and $244 in the second half of 1972. Management estimated that variable costs per passenger carried amounted to $2.53 during the first half of 1972 and to $2.80 during the second half of the year. These variable costs per passenger included $.13 for passenger beverages and supplies in the first half and $.43 in the second half of 1972.

c. Write-off of preoperating costs.

d. Capital gain on sale of one aircraft.

Exhibit 9 Southwest: Discount vs. Regular Fare Flights

	All Routes				
	Regular Flights		Discount Flights[a]		
Month	Passengers	Flights	Passengers	Flights	Price Changes
1971					
June[b]	5,530	424	–	–	
July	15,459	988	–	–	
August	16,121	1,026	–	–	
September	16,440	939	–	–	
October	21,044	1,146	–	–	
November	19,042	963	73	3	$10 fares on some evening weekend flights
December	20,178	981	198	5	
1971 total	113,814	6,467	271	8	
1972					
January	20,694	899	170	4	
February	20,696	912	216	4	
March	24,656	1,014	702	10	
April	24,077	916	573	8	
May	23,112	869	2,189	51	$10 fare on all flights after 9 P.M.
June	22,972	784	4,636	78	
July	18,994	740	5,720	78	Basic fare raised to $26
August	21,257	819	5,739	81	
September	19,020	717	5,358	83	
October	21,894	786	6,599	98	
November	19,825	648	12,141	197	Half-price fares weekdays after 8 P.M. and on all weekend flights
December	17,142	604	10,617	176	
1972 total	254,339	9,708	54,660	868	
1973					
January[c]	18,893	599	13,635	239	Half-price fares on all Dallas–San Antonio flights

Source: Company records

a. Included flights on which gifts were offered.

b. Part-month only.

c. Estimated figures.

Exhibit 10 Southwest: Number of Flights and Passengers on Each Route

	Dallas-Houston		*Dallas–San Antonio*		*San Antonio–Houston*	
Month	*Passengers*	*Flights*	*Passengers*	*Flights*	*Passengers*	*Flights*
1971						
June[a]	3,620	276	1,910	148	–	–
July	10,301	642	5,158	346	–	–
August	11,316	672	4,805	354	–	–
September	11,674	612	4,766	327	–	–
October	14,552	764	6,492	382	–	–
November	14,060	654	4,167	240	888	72
December	14,665	687	4,004	165	1,707	134
1971 total	80,188	4,307	31,302	1,962	2,595	206
1972						
January	16,122	634	2,788	141	1,954	128
February	16,069	640	2,755	142	2,088	134
March	18,285	669	4,270	209	2,803	146
April	17,732	605	4,617	189	2,301	130
May	18,586	584	4,254	198	2,461	138
June	19,782	521	5,198	201	2,628	140
July	17,596	494	5,011	193	2,107	131
August	19,620	546	4,978	208	2,398	146
September	17,472	489	4,734	184	2,172	127
October	20,776	545	5,197	200	2,520	139
November	22,461	507	6,640	199	2,865	139
December	19,080	468	6,211	186	2,468	126
1972 total	223,581	6,702	56,653	2,250	28,765	1,624
1973						
January[b]	21,948	505	7,710	197	2,870	136

Source: Company records

a. Part-month only.

b. Estimated figures.

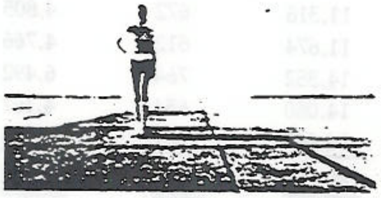
Exhibit 11 "Remember What It Was Like Before Southwest Airlines," TV Advertising, September 1972

SOUTHWEST AIRLINES

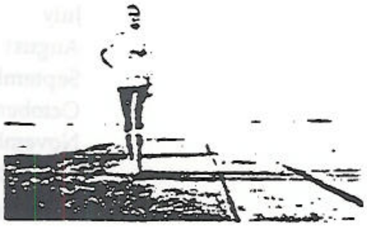
CODE NO: SWA-34-30-72
TITLE: "Executive Class"

TELEVISION STORYBOARI
THE BLOOM AGENCY

1. HOSTESS: Remember what it was like...



2. ...before there was somebody else up there who loved you?



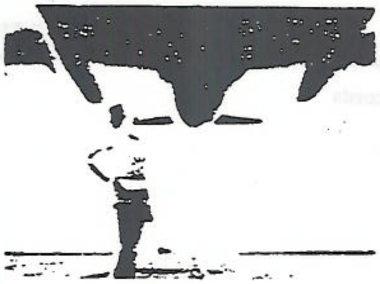
3. There was no such thing a executive class service to Da Houston and San Antonio.

4. With first class leg room, free cocktails for everyone,...

5. ...and a schedule you could depend on.

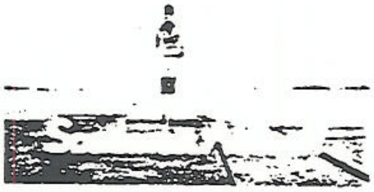
6. (Sfx: jet taking off)...

7. ...



8. ...

9. Remember?



10. (Natural sfx up and out)

Exhibit 12 Southwest: Radio Advertising for Half-Fare Flights—All San Antonio Flights. January 1973

Number:	118–23–2 Length: 60 seconds Date: 12/21/72, revised 12/29/72
Music:	*Clinky piano*
Announcer:	It's time for Captain Moneysaver, the man who knows how to save your dough!
Captain Moneysaver:	Hello, moneysavers! Since Southwest Airlines introduced its half-price sale on all flights every day between Dallas and San Antonio, many listeners have asked that age-old question: Can I get there cheaper? Cheaper than $13? Sure! You can strap 5,000 pigeons to your arms and fly yourself. Or propel your body with a giant rubber band. Put a small motor on a ten-speed bike . . .
Music:	*Light, happy*
Hostess:	Southwest Airlines announces the 60–day half-price sale between Dallas and San Antonio. It's good on all flights every day. Just $13 one way. 25 round trip. So what are you waiting for?
Cowboy:	You mean I kin fly between San Antonio and Dallas on a real jet airplane fer only $13?
Announcer:	That's right! On any Southwest Airlines flight, every day.
Cowboy:	They still gonna have them pretty girls and all?
Announcer:	Same Southwest Airlines love service. And it's cheaper than the best bus service.
Cowboy:	Howzit compare to my pickup?
Music:	*Light, happy*
Hostess:	Fly now while it's half fare on every Southwest Airlines flight every day between Dallas and San Antonio. All our love at half the price.
Voice:	Half price? Can they do that?
Second voice:	They did it!

Prepared by: The Bloom Agency

Exhibit 13 Braniff's Ad for Dallas-Hobby Half-Price Sale, February 1973

Braniff's 'Get Acquainted Sale'

Half-price to Houston's Hobby Airport.

$13 Coach $17 First Class

To Hobby			Back to Dallas-Fort Worth		
Leave		Arrive	Leave		Arrive
7:30 a.m.	Non-stop	8:20 a.m.	8:00 a.m. (Ex. Sun.)	Non-stop	8:50 a.m.
9:30 a.m.	Non-stop	10:20 a.m.	9:00 a.m. (Ex. Sun.)	Non-stop	9:50 a.m.
11:30 a.m.	Non-stop	12:20 p.m.	11:00 a.m.	Non-stop	11:50 a.m.
2:30 p.m.	Non-stop	3:20 p.m.	1:00 p.m.	Non-stop	1:50 p.m.
3:30 p.m. (Ex. Sat.)	Non-stop	4:20 p.m.	4:00 p.m.	Non-stop	4:50 p.m.
5:30 p.m.	Non-stop	6:20 p.m.	5:00 p.m. (Ex. Sat.)	Non-stop	5:50 p.m.
6:30 p.m. (Ex. Sat.)	Non-stop	7:20 p.m.	7:00 p.m. (Ex. Sat.)	Non-stop	7:50 p.m.
			9:00 p.m.	Non-stop	9:50 p.m.

Sale lasts 'til April 1

From now until April 1, all Braniff International flights to Houston's Hobby Airport are priced to go. Half price to be exact. 50% off.

A one-way ticket in coach is $13.00. Round-trip is an even better bargain at $25.00. And in first class, $17.00 one-way, $34.00 round-trip.

We believe we have the best service to Hobby Airport. But not enough people know about it. So, we're offering you a chance to sample our big 727 Wide-Body jets to Houston's Hobby at half the regular price. We call it our "Get Acquainted Sale."

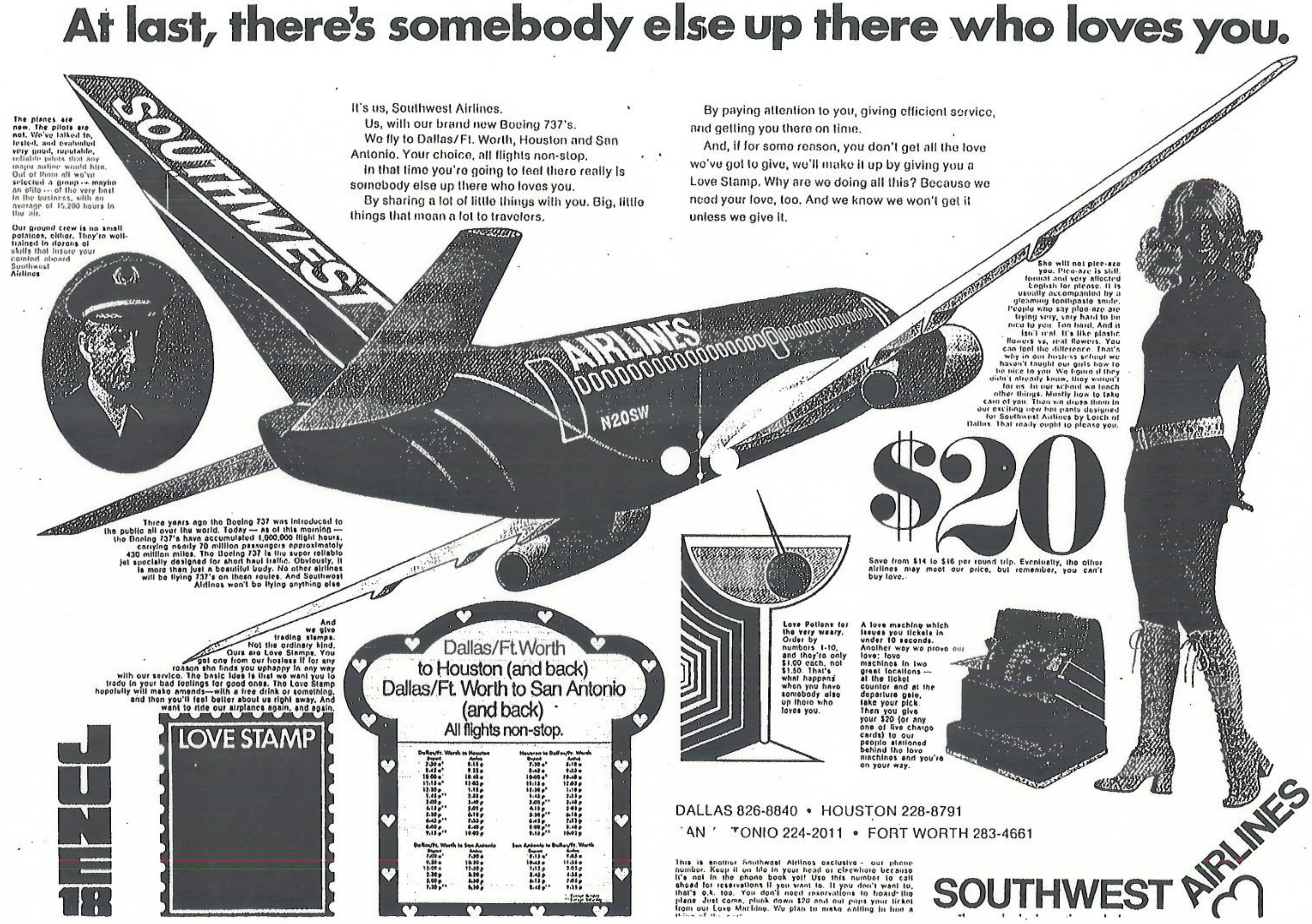
Half price and a reserved seat, too. Call Braniff International at 357-8511 in Dallas; 335-5811 in Fort Worth.

You'll like flying Braniff Style.

BRANIFF

U.S. MAINLAND HAWAII MEXICO SOUTH AMERICA

Source: Dallas newspapers



At last, there's somebody else up there who loves you.

The planes are new. The pilots are not. We've talked to, tested, and evaluated very good, reputable, reliable pilots that any major airline would hire. Out of them all we've selected a group — maybe an elite — of the very best in the business, with an average of 15,200 hours in the air.

Our ground crew is no small potatoes, either. They're well-trained in dozens of skills that insure your comfort aboard Southwest Airlines

It's us, Southwest Airlines.

Us, with our brand new Boeing 737's.

We fly to Dallas/Ft. Worth, Houston and San Antonio. Your choice, all flights non-stop.

In that time you're going to feel there really is somebody else up there who loves you.

By sharing a lot of little things with you. Big, little things that mean a lot to travelers.

By paying attention to you, giving efficient service, and getting you there on time.

And, if for some reason, you don't get all the love we've got to give, we'll make it up by giving you a Love Stamp. Why are we doing all this? Because we need your love, too. And we know we won't get it unless we give it.

She will not plee-aze you. Plee-aze is stilt, formal and very affected English for please. It is usually accompanied by a gleaming toothpaste smile. People who say plee-aze are trying very, very hard to be nice to you. Too hard. And it isn't real. It's like plastic flowers vs. real flowers. You can feel the difference. That's why in our hostess school we haven't taught our girls how to be nice to you. We figure if they didn't already know, they weren't for us. In our school we teach other things. Mostly how to take care of you. Then we dress them in our exciting new hot pants designed for Southwest Airlines by Lorch of Dallas. That really ought to please you.

$20

Save from $14 to $16 per round trip. Eventually, the other airlines may meet our price, but remember, you can't buy love.

Love Potions for the very weary. Order by numbers 1-10, and they're only $1.00 each, not $1.50. That's what happens when you have somebody else up there who loves you.

A love machine which issues you tickets in under 10 seconds. Another way we prove our love: love machines in two great locations — at the ticket counter and at the departure gate, take your pick. Then you give your $20 (or any one of five charge cards) to our people stationed behind the love machines and you're on your way.

Three years ago the Boeing 737 was introduced to the public all over the world. Today — as of this morning — the Boeing 737's have accumulated 1,000,000 flight hours, carrying nearly 70 million passengers approximately 430 million miles. The Boeing 737 is the super reliable jet specially designed for short haul traffic. Obviously, it is more than just a beautiful body. No other airlines will be flying 737's on these routes. And Southwest Airlines won't be flying anything else

And we give trading stamps. Not the ordinary kind. Ours are Love Stamps. You get one from our hostess if for any reason she finds you unhappy in any way with our service. The basic idea is that we want you to trade in your bad feelings for good ones. The Love Stamp hopefully will make amends—with a free drink or something, and then you'll feel better about us right away. And want to ride our airplanes again, and again.

LOVE STAMP

Dallas/Ft. Worth
to Houston (and back)
Dallas/Ft. Worth to San Antonio
(and back)
All flights non-stop.

Dallas/Ft. Worth to Houston		Houston to Dallas/Ft. Worth	
Depart	Arrive	Depart	Arrive
7:30 a*	8:15 a	7:30 a*	8:18 a
8:45 a*	9:33 a	8:45 a	9:33 a
10:00 a*	10:45 a	10:00 a*	10:48 a
11:15 a*	12:03 p	11:15 a	12:03 p
12:30 p	1:18 p	12:30 p*	1:18 p
1:45 p**	2:33 p	1:45 p	2:33 p
3:00 p	3:48 p	3:00 p**	3:48 p
4:15 p**	5:03 p	4:15 p	5:03 p
5:30 p	6:18 p	5:30 p**	6:18 p
6:45 p**	7:33 p	6:45 p	7:33 p
8:00 p	8:48 p	8:00 p**	8:48 p
9:15 p**	10:03 p	9:15 p**	10:03 p

Dallas/Ft. Worth to San Antonio		San Antonio to Dallas/Ft. Worth	
Depart	Arrive	Depart	Arrive
7:00 a*	7:50 a	8:15 a*	9:05 a
9:30 a	10:20 a	10:45 a	11:35 a
12:00 n	12:50 p	1:15 p	2:05 p
2:30 p	3:20 p	3:45 p	4:35 p
5:00 p	5:50 p	6:15 p	7:05 p
7:30 p**	8:20 p	8:45 p**	9:35 p

* Except Sunday
** Except Saturday

DALLAS 826-8840 • HOUSTON 228-8791
SAN ANTONIO 224-2011 • FORT WORTH 283-4661

This is another Southwest Airlines exclusive - our phone number. Keep it on file in your head or elsewhere because it's not in the phone book yet! Use this number to call ahead for reservations if you want to. If you don't want to, that's o.k. too. You don't need reservations to board the plane. Just come, plunk down $20 and out pops your ticket from our Love Machine. We plan to make waiting in line a thing of the past.

SOUTHWEST AIRLINES

JUNE 18

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9-591-133
Rev. 7/10/91

9

WHARTON REPROGRAPHICS

Barco Projection Systems (A)

Worldwide Niche Marketing

On Saturday morning, September 23, 1989, Erik Dejonghe, Frans Claerbout, and Bernard Dursin met to draft a crucial presentation that Dejonghe was scheduled to make to the Barco N.V. board of directors on the following Monday. As the senior vice president and chief operating officer (COO) of Barco N.V., with responsibility for Barco's Projection Systems division (BPS), Dejonghe had to respond to the recent move of a BPS competitor that threatened the heart of the division's sales. Claerbout, the general manager of BPS, and Dursin, in charge of managing Barco's distribution subsidiaries and coordinating the worldwide marketing of projectors, had both worked closely with Dejonghe to formulate the company's options.

One month earlier, the Sony Corporation surprised BPS and the rest of the industry with the unveiling of its 1270 "superdata" projector at the Siggraph trade show in Boston. Sony's product had seized first place at Siggraph as the industry's highest performing projector from BPS and its BG400 projector. More damaging still, the 1270 was rumored to be priced 20%-40% below the established market price in its performance class. The industry saw the 1270's positioning as an attempt to widen the market through lower prices. For BPS—a small, batch manufacturer—the 1270's combination of low-price and high-performance threatened to collapse its traditional market segmentation, and to bring prices down to untenable levels. Dejonghe estimated that BPS stood to lose as much as 75% of its forecasted 1990 profits.

Sony's introduction of the 1270 had been timed to prevent competitive response; the industry's most important trade show, Infocomm, was scheduled to take place in the United States in January. Major customers, industry analysts, and dealers would be there, and BPS' performance would determine its sales for the rest of the year. Dejonghe, Claerbout, and Dursin had sketched out their pricing and product development options, and they weighed each one carefully as they plotted BPS' strategy for the following months.

Research Associate Krista McQuade prepared this case under the supervision of Professor Rowland T. Moriarty as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. The data contained in this case have been adapted and are not useful for research purposes. Historical information has been condensed.

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Barco's Projection Systems Division

Barco Projection Systems (BPS) was the second largest division of the Barco N.V. group, with 350 employees, and turnover of 1.39 billion Bfr ($35 million)[1] in 1988 (**Exhibit 1**). Headquartered at Kuurne, Belgium, 15 km from Barco's main facilities at Kortrijk, the division had been formed in the early 1980s as a result of Barco's interest in the emerging technology of video projection. Throughout the 1980s, the division had grown rapidly. In 1988 it represented 23% of Barco N.V.'s turnover of 5.98 billion Bfr ($150 million).

Background: Barco N.V.

Barco N.V. began operations in 1934 as a producer of radio broadcast receivers. In 1948, it built its first television (TV) receiver, and from then on, consumer TV formed the bulk of its sales. As a small company, Barco was able to compete successfully by carving out a market on the basis of its R&D strength and product quality. From 1955 to 1975, the company grew rapidly and expanded into broadcast monitors and professional video equipment. At the end of the 1970s, however, during the global recession that followed the 1977 oil supply shock, demand for Barco's consumer products sagged. In response, the company redefined its focus from consumer to industrial markets. In 1989, Hugo Vandamme, Barco's president and CEO, looked back on that period:

> We knew that as a small, batch manufacturer we could not have continued to survive in markets for consumer products. Instead, we redrew our strategy to try and focus on top-of-the-line products in niche markets. In one instance, in 1983, we went as far as to say "no" to a customer asking for 15,000 computer monitors. We were able to turn that order down because we had spread our operations out and become involved in other markets. We had set out with a clear vision of who we wanted to be, how we wanted to operate, and where we wanted to compete. Vision is what counts.

The company's strategy throughout the 1980s consisted of three key elements. First, Barco committed itself to becoming a leader in a variety of distinct, but complementary, niche markets. The company entered a new activity only if it had an in-depth knowledge of the market and the technology involved, and if it could be among the top three manufacturers. The second element of Barco's strategy was a strong commitment to research and development; throughout the 1980s, between 8% and 10% of its annual turnover and 15% of the company's employees were dedicated to R&D. And third, in addition to growth in its businesses, the company sought a growing presence in international markets in sales, product development, and production. In 1988, Barco launched a global expansion campaign for acquisitions and joint ventures abroad. Three major acquisitions in the first half of 1989 totalled 4.4 billion Bfr ($110 million). In that same year, Barco reorganized its operations into seven, autonomous divisions, each with its own research, product development, production, marketing, and sales.

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[1] For this case, one U.S. dollar is equal to 40 Belgian francs (Bfr). The actual value of the dollar was extremely volatile during the historical period covered.

In 1989, with 2,400 employees, Barco N.V. was positioned as one of the top three worldwide manufacturers in each of its product lines: automated production control systems, graphic arts, computer-aided design, and industrial projection. As a result of the company's early 1989 acquisitions and expanding sales in several key markets, turnover was expected to grow 50% in 1989. A number of international awards testified to Barco's technological lead in several fields. In 1988, for example, the company received the international Emmy Award for its studio monitors. The year after, BPS won the Hi-Vi Silver Award in Japan, given for the product contributing the most to electronic visualization technology.

BPS Organization within Barco N.V.

As part of the divisionalization of Barco N.V.'s operations in 1989, President Hugo Vandamme and Senior Vice President Erik Dejonghe divided responsibility for products between them; BPS reported to the latter. Dejonghe, who assumed his current position at the time of reorganization, was part of the team that propelled Barco's industrial projection activities throughout the 1980s. Joining Barco in the early 1980s, as the product and project manager for special activities, he was promoted in 1983 to president of the division that fabricated TVs and large screen projectors. Frans Claerbout was head of the R&D department for that division, while Bernard Dursin was in charge of its marketing and sales. Dejonghe, Claerbout, and Dursin worked closely together on projectors throughout the 1980s.

In 1989, Claerbout was promoted to vice president of Barco N.V. and was named general manager of BPS. Dursin, also named a Barco N.V. vice president, became the general manager of Barco International, a group that managed the marketing of certain Barco product lines worldwide, including projectors. Claerbout's and Dursin's offices remained within shouting distance of one another, however, and they continued to collaborate on projectors. Dursin continued to manage relations with the division's distributors, and, in addition, he played a leading role in setting the prices for projectors worldwide. Three regional marketing managers, who reported directly to Claerbout, were responsible for sales support to all of the division's distributors. Camiel Derijcke replaced Claerbout in 1989 as the chief engineer in charge of product development at BPS, however Claerbout continued to make the final decisions. (See Exhibit 2 for BPS' organization chart.)

BPS Products

BPS designed, manufactured, and marketed sophisticated video projectors for industrial applications. Unlike movie projectors, which operated by shining white light through an image recorded on celluloid film, video projectors recreated an image electronically. Barco's projectors could be connected to TVs, VCRs, and most recently to computers. They were used to project images and information stored in these media onto large screens, for large-audience viewing (see Exhibit 3 for a diagram of the unit.) BPS did not invent video projection, but throughout the 1980s, it played a key role in the development of niche market applications for the technology. By 1989, BPS had developed three lines of projectors: video, data, and graphics.

All of BPS' projectors were based on the same design concept, and comprised three major components—tubes (3), lenses (3), and electronics. The division's product line was built primarily around a 7" tube. BPS' strength had traditionally been in electronics; given the same lens and tube combination, BPS was able to achieve measurably better performance in each of the main areas of evaluation than its competition. In 1989, the most important considerations in evaluating the performance of an industrial projector were brightness (measured in lumens), image quality, and resolution. A projector's three components worked together to provide particular results. In general, the tubes, lenses, and electronics represented 15%, 20%, and 50% of the projector's cost structure, respectively. The housing and mechanics represented an additional 15%.

What differentiated BPS' product lines was scan rate, or scanning frequency, which measured the speed at which a projector was able to read and process incoming electronic signals. BPS used scan rate to segment its markets; as the sophistication of the application for BPS projectors increased, scan rate increased. BPS' video projectors were designed for compatibility with standard video sources, such as broadcast TV and VCR, and scanned at 16 kilohertz (kHz), or 16,000 lines per second[2]. Its data projectors scanned at 16 kHz to 45 kHz, and were capable of displaying input from personal computers as well as video sources. Its graphics projectors, BPS' most sophisticated products, scanned from 16 kHz to well above 64 kHz, and accepted input from the powerful computer-aided design and manufacturing (CAD/CAM) systems, as well as from video and data sources. A projector needed to match the scan rate of its source for a clear picture to result; Barco's graphics projectors would not be compatible with any computer scanning higher than 64 kHz. BPS was continually upgrading the scan rates of its most sophisticated projector line to match advances in computer technology.

In 1989, BPS had well-established sales for its video and data lines in a variety of entertainment, training, and presentation markets. Board rooms, training centers, discotheques, classrooms, airplanes, and betting shops around the world had all installed Barco projectors. The monthly sales log of one of BPS' European distributors, for example, listed the sale of four data projectors to the Commission of the European Economic Community (E.E.C.) for video conferencing, five video projectors to a chain of holiday resorts for entertainment rooms, and five data projectors to Groupe Bull, a large French computer company, for training centers. IBM had been one of BPS' best customers throughout the 1980s, having decided in 1984 to equip all of its U.S. training centers with Barco projectors.

In addition, BPS was pursuing a number of more specialized markets for its projection technology, such as process control and simulation. Data and graphics projectors were used for these specialized applications. In 1989, BPS installed a series of projectors in the process control room of the U.S. Union Pacific Railroad, which displayed more than 23,000 km of track on a 200 foot-wide screen. Barco projectors could also be found at the process control centers for the English Channel Chunnel project, in factories, and in flight simulation rooms for military and aerospace applications.

Evolution of BPS' Product Lines and Markets

Barco N.V.'s involvement in projection systems began in 1981, when it developed a video projector for showing motion pictures in airplanes. The projector, called the BarcoVision 1 (BV1), was priced at 450,000 Bfr ($11,250), and sold strongly in the U.S. and European markets. As the company began to investigate other applications for its technology, Dejonghe, Claerbout, and Dursin presented their views on the future of projection to Barco's board of directors. They believed the company could pursue one of three directions: 1) it could downgrade its technology to suit consumer video applications, 2) it could upgrade its technology for long-distance, high-performance video projection, 3) or, it could enter the untested market for computer applications.

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[2] 16 kHz = 30 frames of information per second x 533.3 lines per frame

In their presentation to the board, Dejonghe, Claerbout, and Dursin related discussions of a possible computer-compatible projector that they had had with one BV1 customer, IBM. Developing the computer application, they learned, was feasible, but scan rates would have to be increased to match a computer's faster electronics. Moreover, the projector would have to be designed with enough flexibility to be used by computer companies with different standard scanning frequencies. But Dejonghe and the others felt that the complexity of the application would work to Barco's advantage, keeping larger firms out of the market. They also thought it had the potential to expand projection markets significantly. The board voted to follow their suggestion, and made Dejonghe the new president of the TV and projector division.

In 1983, the sales of that division at Barco were split 80%-20% between TV and projectors. Dejonghe set out to reverse that ratio. By the end of 1983, BPS had introduced the BarcoData 1 (BD1)—the first computer-compatible projector on the marketplace. Priced at 540,000 Bfr ($13,500), the BD1 was able to scan to 18 kHz, and was immediately successful in corporate presentation markets, as well as others. In 1984, BPS introduced two more projectors—the BV2 (395,000 Bfr, $9,875) and the BD2 (590,000 Bfr, $14,750), which incorporated engineering advances that permitted higher scan rates, and thus broader compatibility. From 1984 on, BPS' video and data lines continued to evolve, keeping pace with breakthroughs in design, improved components, and, in the case of data projectors, with ever-changing computer technology. In 1986, BPS began work on a graphics application for its technology.

BPS developed its graphics projectors to handle input from CAD/CAM sources, which required the upgrading of a data projector's scanning frequency to 64 kHz and above. (BPS' most powerful data projector at that time, the BD3, scanned up to 32 kHz). Dejonghe recalled how the division's market segmentation scheme was formalized:

> I remember the meeting when we decided to create a graphics segment of the marketplace for a machine scanning at 64 kHz and above. Limiting the scan rate on our data projectors would frustrate some end-users. Our plan was to respond to that frustration by offering a graphics projector. We could have made it one machine, but we could not have sold it for the highest price.

Dejonghe, Claerbout, and Dursin decided to limit video-only projectors to a scan rate of 16 kHz; data projectors to a scanning range of 16 kHz to 45 kHz; and graphics projectors, their newest line, to a scanning range of 16 kHz to 64 kHz and above. In June 1987, BPS introduced its first graphics projector, the BarcoGraphics 400 (BG400), for 1 million Bfr ($25,000). The BG400 was the industry's most sophisticated high-end projector, scanning at up to 72 kHz. By 1989, the price of the BG400 had come down to 960,000 Bfr ($24,000). (**Exhibit 4** displays a time chart of BPS' product evolution.)

By September 1989, BPS was looking toward its next generation of product introductions—digitally controlled projectors. Currently, all adjustments to the settings of a BPS projector were carried out manually. The new projectors would incorporate digital technology to allow a projector's mechanisms to be controlled by a hand-held remote-control unit. BPS planned to introduce the technology into the data segment of its marketplace first, and then into its graphics and video segments. BPS engineers had reached the beta test point for its first digital data projector, to be called the BD700, and were completing all modifications. The BD700, to be priced at 640,000 Bfr ($16,000), was scheduled for full production and delivery in October 1989.

Frans Claerbout summed up the forces driving the evolution of Barco's projection product line throughout the 1980s as 1) the constant search for the best possible image, 2) flexibility towards inputs, and 3) increasing user-friendliness. Product evolution, he explained, was "more a result of engineering solutions to problems that arose, than of a specific development plan." Barco's competition in industrial projection had adopted its practice of segmenting its markets by scanning frequency. Video, data, and graphics had become the standard terms for each market by 1989.

Projector Markets

Through 1994, the worldwide market for projectors was expected to grow 8.5% per year. Growth rates for the video, data, and graphics segments of the market, however, varied widely (see Table A).

Table A The Worldwide Market for Industrial Projectors, 1988

	% Units	Predicted Growth 1989-1994[a]	Price Range
VIDEO	63%	.8%	200,000-280,000 Bfr ($5,000-$7,000)
DATA	33%	12.3%	320,000-600,000 Bfr ($8,000-$15,000)
GRAPHICS	4%	40.2%	800,000-960,000 Bfr ($20,000-$24,000)
TOTAL	100%	8.5%	200,000-960,000 Bfr ($5,000-$24,000)

[a] Estimated average annual growth

The largest market for industrial projectors in 1989, across all segments, was North America, with 50% of total unit sales. Western Europe and the Far Eastern market followed, with 36% and 12%, respectively, of total unit sales. The five-year annual market growth predicted for these regions was 9%, 11.5%, and 18%.

BPS in 1989

In September 1989, the data segment of the marketplace represented the heart of BPS' sales for both units and revenues (see Table B.) The video segment was moving toward commodity, and BPS was concentrating less and less of its effort in this area. In the high end of the marketplace, BPS was the acknowledged technological leader. BPS estimated its worldwide market share, based on the total number of units sold, at 8% in video, 23% in data, and 55% in graphics.

Through 1994, BPS predicted that its video, data, and graphics unit sales would grow 1.4%, 12.3%, and 25% respectively per year. It anticipated that the worldwide market for industrial projection would continue to expand for at least five more years before being superseded by new technologies. In 1989, the division's principal products were the BD600, which scanned to 45 kHz, and the BG400, which scanned to 72 kHz. The two projectors sold in 1989 for 480,000 Bfr ($12,000) and 960,000 Bfr ($24,000), respectively (Exhibit 5). BPS' main line of video projectors sold for 280,000 Bfr ($7,000). BPS sold 4,400 units in all three categories in 1988.

Table B BPS Sales by Segment, 1988[a]

	% units	% revenues	% margins
VIDEO	35	23	20
DATA	53	54	51
% BD600 of total data	79	67	NA
GRAPHICS	12	23	29
% BG400 of total graphics	85	80	NA
Total	100	100	100

[a] Includes sales to captive BPS distributors.

Distribution

In 1989, BPS had a two-step distribution system with 45 distributors and approximately 400 dealers worldwide.[3] The division owned four of its distributors—in Belgium, France, the United Kingdom, and the United States—while the other 41 operated independently, but were Barco-exclusive for projectors. Fully-owned distributors represented 61% of BPS' total unit sales, 61% of its revenues, and 59% of its margins. By individual product, they represented 57% of unit sales, 53% of revenues, and 50% of margins for video projection; 61% of units, 60% of revenues, and 57% of margins for data projection; and 75% of units, 71% of revenues, and 70% of margins for graphics projection.

BPS started selling its video projectors in Europe and the United States in 1982, through Barco's video distribution network. When the division entered the data projection market in the mid-1980s, these distributors had been required to invest in training and to add technical personnel. In Belgium, BPS had always handled its own distribution. In the United States, Barco had established a wholly-owned distribution subsidiary in 1986 after the insolvency of its distributor. In France, a key market where the distributor had not kept up with the necessary investment, BPS had acquired its operations in 1988.

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[3] BPS could only estimate the number of dealers that carried its products worldwide, since most independent distributors were reluctant to disclose exact figures.

In Germany, a market which represented 5%, 9%, and 12% of video, data, and graphics unit sales respectively in 1988, the owner had consistently refused a BPS offer of purchase. In 1989, he had three years remaining in his contract with BPS. Regional Marketing Manager Tom Vanthuyne explained why he would have preferred to own the German distributor:

> Independent distributors tend to think short term. They are not willing to invest in advertising, or to broaden the number of dealers they work through because they want the margins themselves—for example, they prefer going direct on large accounts. When does it make sense to buy? Until now, we've done it when there were problems in our key markets. In the case of my German distributor, although it is doing OK, it is not making as much money for Barco as it is for itself. That market could be bigger; recently we lost a deal of 600 video units simply because our distributor there was not prepared to cut its margins.

For each product, BPS established a distributor price in Belgian francs. The distributors, in turn, set their own price to dealers. On average, prices in the United States were a consistent 15% lower than in Europe. The typical pricing relation approach appears in **Table C**.

Table C BPS' Pricing Index

	List Price	Actual Price	Comments
BPS	100	100	41% direct cost, 59% gross margin
Distributor	142	142	30% margin, 12% import duties and freight
Dealer	204	173-184	List price calculated with 30% margin Street price incorporates discounts of 10%-15%

Dealers carrying Barco projectors ranged from "box" dealers to systems dealers. The box dealer, normally found in large cities, sold projectors on the basis of cost alone, providing no service or expertise. Twenty percent of BPS' dealers were "box", while 90% of box sales were video projectors. Systems dealers, at the other extreme, had the know-how to integrate and install packages of equipment according to the end-user's individual needs. Often these systems involved more than one brand of equipment. Given the complexity of Barco projectors—particularly its data and graphics models—80% of the company's dealers were the systems-type.

Projector dealers typically carried three manufacturers' projectors, selecting a line for the low, middle, and high ends of the market, although these could overlap. In addition, projector dealers rounded out their sales with other audio-visual equipment such as overhead projectors, lighting, screens, and consumer electronics. A typical dealer in the United States had turnover ranging from 120 million Bfr ($3 million) to 800 million Bfr ($20 million). About 8%-10% came from after-sales service.

Although a dealer's ideal margin on projectors was 30%, fierce competition resulted more often in margins of 15% to 20%, and occasionally a dealer would go as low as 5% to preserve a customer. Dealer overhead, however, averaged greater than 5%. Margins on service were higher, typically 25% to 35%, and sometimes as high as 70%. Dealers processed information from manufacturers, held vendor fairs and training sessions, and sent mailings. Barco's dealers were required to attend sales and technical courses given by the distributor, and to hire a certain number of Barco-approved technicians. In return, BPS promised price protection for unsold units at a time of a price drop, and stable pricing between the time of the first customer contact and the final order, generally a period of three to six months.

Barco projectors had a reputation among dealers for the highest quality final image and excellent reliability once fully installed. Dealers complained, however, that the machines were unnecessarily complex—designed to win awards, and not be friendly to the end-user. They frequently encountered complications in installing the equipment. End-users, too, often found BPS' control panels and instructions too complex. BPS' engineers contended that many of the problems arose when the instruction manual was disregarded.

The typical end user purchased a new projector every five years. With an eye to ever-increasing computer scan rates, customers tended to purchase more performance in a projector than they needed.

Competition

In 1989, three companies competed with Barco in the data and graphics segments of the market for industrial projection: Sony, Electrohome, and NEC. Several other firms, including Panasonic, Mitsubishi, and General Electric, competed primarily in the video and low-scanning data segments of the marketplace, and were not considered major competitors to BPS. In data projection, Sony held the largest percentage of the marketplace, followed by Barco, Electrohome, and NEC. In graphics, BPS was in first place with 55% of the market. BPS' only major competition in the graphics segment was Electrohome, with 44% (see Table D.) Exhibit 6 lists the products of each major competitor.

Table D Market Share of the Major Competitors, 1988
as % of total units sold[a]

		BARCO	SONY	E.H.	NEC	OTHER
Europe	Data	35	35	8	6	16
	Graphics	55	-	43	-	2
N.America	Data	16	62	14	8	-
	Graphics	60	-	40	-	-
Far East	Data	15	30	7	23	25
	Graphics	15	-	80	-	5
Gen.Total	Data	23	49	11	9	8
	Graphics	55	-	44	-	1
	TOTAL[b]	25	45	14	8	8

[a] To be read horizontally; "Barco held 35% of the market for data projectors in Europe, vs. Sony's 35%, Electrohome's 8%, etc.
[b] Omits video

Sony

The Sony Corporation, headquartered in Tokyo, Japan, was a diverse manufacturer of consumer electronics, with 1988 turnover of 460 billion Bfr ($11.5 billion). Industrial projectors were manufactured at its Sony Projectors division, and were estimated to represent 1% of the total company's turnover. Sony was the main player in the video segment of the projection marketplace, with 50% of all units sold. In data, too, Sony held 49% of total units sold; however, its most powerful projector in 1989, the 1031, scanned at 35 kHz. In 1988, the company's product mix was 66% video and 34% data, on a total of 15,000 units.

Typically, Sony projectors were positioned below Barco's in terms of performance (scan rate, brightness, image quality, and resolution), and were, on average; 15% lower in price. BPS guessed, in addition, that Sony had fewer engineers dedicated to projection than BPS. BPS expected Sony's next product introduction to be a higher-performance data projector, introduced in the fall of 1989, with an upper scanning limit between 46 kHz and 50 kHz. The division also expected Sony to enter the market with a graphics projector in late 1990.

Sony sold projectors through its network of captive commercial video distributors worldwide. In turn, these distributors worked with over 1,500 dealers across the globe. It was estimated that 50% of Sony's dealers were box dealers. Extensive dealer coverage--Sony had 500 dealers in the U.S. market versus BPS' 100--resulted in a low street price for Sony projectors. While dealers used 30% margins to figure list prices on both Sony and Barco projectors, Sony units were typically discounted 15% for the final sale, while Barco units were discounted 10%. Dealers tended to prefer to sell Barco, because they received not only a higher price, but a higher percentage of that price. In general, however, dealers did a higher volume in Sony. In 1989, few dealers could survive without the Sony volume; an estimated 80% to 90% of professional audiovisual dealers worldwide carried Sony video equipment. Among dealers, Sony had a reputation for reliability and low price.

Sony Components and BPS Sony had entered industrial projection in 1985, with the 1020 video projector. Although it was slower than Barco's video projectors at that time, it had a sharper focus, indicating a better quality tube. Upon closer examination, BPS engineers found the tube, manufactured in-house at Sony Components, (a division of Sony Corporation), to be far superior in quality to Clinton's, BPS' U.S.-based supplier.

In late 1985, Frans Claerbout traveled to Japan to investigate the possibility of buying from Sony Components. The division, which remained independent from Sony Projectors up to the chairman's level, agreed to supply Barco, and six months later, the first Sony tube was introduced in the Barco Data 3 (BD3). Measured by lumens, Barco was able to achieve better brightness with Sony's tube than Sony itself. Barco terminated its supply relationship with Clinton, and Sony became its sole supplier. Claerbout commented on the relationship:

> Our relationship with Sony is a strange one. We are competitors with Sony projectors, yet we source from their in-house supplier. To obtain tubes that suit our needs, we share a certain amount of technical and developmental information with Sony Components, while they keep us abreast of their latest developments. The fact that we rely on them for an important component makes us vulnerable, but at the same time we think that they value our business because we bring their manufacturing costs down. I would say that over the course of our relationship with Sony Components, I think that they have treated us fairly.

In one instance in 1987, however, Sony introduced a video projector with a tube that Barco had not seen; BPS subsequently purchased the tube, which appeared in its BD600.

In 1989, BPS was actively seeking other tube suppliers. All other tubes available on the market were either inferior to Sony's, more expensive, or both. Many firms manufactured tubes suited to consumer video applications, including Hitachi, Toshiba, Thomson, and Philips, but only the Sony tube had the quality necessary for high-end video projection. Sony, Barco, and Electrohome all sourced tubes from Sony Components. To protect itself against a sudden supply freeze, BPS kept a three-month supply of tubes in-house, and two months of orders in transit from Sony.

BPS spent 90-100 million Bfr ($2.25 million to $2.5 million) annually for approximately 20,000 Sony tubes, which represented around one-fifth of Sony Component's projector tube business. One tube cost between 5,000 Bfr ($125) and 18,000 Bfr ($450), depending on size and quality, and BPS negotiated continuously with Sony to get the prices down. Altogether, perhaps 35% of Sony Component's business was non-captive. Operations Manager Johan Vannieuwenhuyse observed: "Any time Sony wanted to squeeze us out, they could raise the price of their tubes. We would be dead in the water six months before finding another source. But I don't think they will. When we discuss other suppliers, we are taken seriously." Erik Dejonghe agreed:

> Sony has told me that their ultimate goal is to be 50% an industrial supplier, and 50% a consumer supplier—not to beat Barco in projection. I am making a bet that they continue to supply us reliably. They need competition to survive, and we are the only competition on whom they make substantial amounts of money.

In February 1989, Sony Components contacted BPS about a new 8" tube that it was developing. BPS received its first sample of the product in June, and its engineers were running tests on its performance capabilities. The face of the tube was square, rather than the conventional rectangular shape, and the product was significantly more costly than the 7" tubes that BPS was currently sourcing from Sony. BPS engineers had considered incorporating the new tube in the BD700 data projector, but had decided against the idea because it involved redesigning the shape of the projector's chassis, and sourcing a new lens to match.

Other Competitors

Electrohome Electrohome was a privately-held Canadian electronics manufacturer, with 1988 turnover of 5.6 billion Bfr ($139.8 million). Industrial projectors were the most successful group in its Electronics division, which had turnover of 2.5 billion Bfr ($62.5 million) in 1988. Electrohome operated in the data and graphics segments of the marketplace only, and was BPS' largest competitor in graphics. In terms of unit sales, Electrohome was the third largest player, behind Sony and Barco, with 1,585 units sold in 1988. Its product mix was 73% data and 27% graphics. Worldwide, the company had an estimated 11% of total data units sold, and 44% of graphics units.

Electrohome was estimated to have comparable distribution strength to BPS, with close to 100 dealers in the U.S. market; 80% of Electrohome's dealers were systems specialists. Given the intense competition between BPS and Electrohome in graphics, it was rare to find the two manufacturers' products sold by the same dealer. In general, Electrohome's products were priced just below BPS'. Together with BPS, it was viewed as having higher quality projectors than Sony.

NEC NEC was a major Japanese manufacturer of electronics, with 1988 turnover of 876 billion Bfr ($21.9 billion). The company sold video and data projectors, with a product mix divided 48% and 52% between the two. NEC had pioneered digital convergence technology in the marketplace, introducing a digital data projector in 1987 that became the market standard.

The company had not captured as much market share as expected, however, in part due to its inefficient distribution network. Originally, NEC projectors had been sold through the company's well-established network of computer dealers. When sales proved disappointing, NEC granted an OEM agreement to the U.S.-based General Electric Corporation (GE). In 1988, the company sold 1,799 units through its own network, and another 1,200 through GE. The company was estimated to hold 4% of the video market worldwide, in terms of units, and 9% of the data market.

The Sony 1270 Introduction

In August 1989, at the Siggraph trade show in Boston, Sony previewed a projector whose performance shocked Barco and the rest of the industry. Introduced as a "superdata" projector, Sony's new model—the 1270—had the power to scan to 75kHz, placing it in a market for high-performance graphics applications that BPS could not enter. In addition, the 1270 featured the new 8" Sony tube, which gave it higher marks than the BG400 in brightness, image quality, and resolution. Price rumors at Siggraph, however, placed the unit in BPS' data range, at 600,000 Bfr to 800,000 Bfr ($15,000 to $20,000). If these rumors proved true, such performance had never been available on the market for such a low price. Erik Dejonghe, Bernard Dursin, and Sjoerd de Clerck, the regional marketing manager for the United States, were the Barco representatives at Siggraph that afternoon. Sjoerd de Clerck described the scene:

> Sony had chosen the U.S. market for its kick-off preview. They had one pre-production unit set up in a very small booth, and their presentation was quite low-key. But the 1270 was a show-stealer. It was a magnificent product. I spent two days at the booth, in a crowd of people, trying to find out as much as I could.

Dejonghe and the others were not so much surprised by a Sony introduction, as by the type of projector the 1270 turned out to be. There had been rumors, spread mostly by dealers, about an impending Sony introduction earlier in 1989. Erik Dejonghe explained:

> Barco had a pretty good idea that Sony was bringing out a new product, but we had expected it to be a direct competitor for the BD600. We thought it would be a 46-50 kHz machine, priced 10%-15% lower than ours. In response, we planned to introduce a 64 kHz digital upgrade of the BD600 (the BD700) by October. We planned to maintain the 960,000 Bfr ($24,000) price tag on our BG400 until we introduced a digital version (the BG800) in late 1990. Then, we expected Sony to introduce a 75 kHz graphics projector in 1990, priced somewhere near 800,000 Bfr ($20,000). All of our projections, however, were based on the assumption that Sony would respect our "vision" of the marketplace. The 1270 did just the opposite. Its positioning threatened to take a lot of money out of the industry.

Sony had announced that it would begin a roll-out of the 1270 in its major markets in November. The company planned the largest-ever publicity campaign in the history of its involvement in industrial projection; for example 15,000 customers, dealers, and distributors had been invited to the 1270's preview in France, and 5,000 to the preview in Belgium. Regional Marketing Manager Michel Vandeplas commented:

> It is obvious that Sony is not interested in competing with Barco and Electrohome for a few hundred projectors per year in the graphics segment.

> Instead, their aim is to reconquer our data and graphics markets, and, to do it, they need to break their market image as a mass producer of low-end products.

Although the price reports on the projector could not be confirmed, confusion reigned in the marketplace. Dealers were panicked about the possibility of a low priced graphics projector from Sony, while Barco distributors were anxious to know how Barco planned to react. In early September, in an effort to calm the market, Barco had spread the word that it did not believe the rumors about the low price of the 1270. Privately, however, BPS management was worried about the potential for significant erosion of its market share. On the plane ride home from Boston, Dejonghe calculated that BPS stood to lose as much as 75% of its forecasted 1990 profits.

Saturday, September 23, 1989

As Saturday morning turned into afternoon, Dejonghe, Claerbout, and Dursin continued to weigh the options that confronted them. Mindful that BPS risked losing up to 75% of its forecasted 1990 profits, they had yet to reach agreement on the course to recommend to the board on Monday.

Pricing Options

Sony had targeted the U.S. and European markets with its 1270—markets which represented 83% of BPS graphics revenues and 91% of its data revenues. In the month since Siggraph, Dejonghe, Claerbout, and Dursin had given considerable thought to the potential impact of the 1270 for the rest of 1989 (October, November, and December) and 1990. By their estimations, if the BG400's price remained unchanged and the 1270 was priced at 800,000 Bfr ($20,000), the BG400 could lose 30% of its market share, or 153.8 million Bfr ($3.85 million)[4]. At 600,000 Bfr ($15,000), the Sony 1270 threatened to capture 60% of the BG400's market share, or 307.5 million Bfr ($7.69 million). In addition, at this lower price point, Dejonghe and the others were concerned that the 1270 would cause significant share erosion of the BD600, priced at 480,000 ($12,000).

How should the BG400 and the BD600 be priced in response to the Sony 1270? For each machine, there were the questions of how much, if any, of a price change to implement, which markets to lower prices in, and over what time frame. Dursin reported that BPS' German distributor was feeling the pressure of the 1270 most severely, and had been calling for a significant price decrease since Siggraph. In early September, the president of the distributorship had declared:

> The German market is the second largest consumer of BG400s in the world. Our dealers inform us that Sony is taking advance orders on its 1270 in Germany. We need to protect this market, and to do it, we need to drop the price on the projectors drastically and immediately.

---

[4] BPS estimated that graphics sales for the last three months of 1989 would reach 106.7 million Bfr ($2.67 million), making the total for the year 426.8 million Bfr ($10.67 million). Assuming 25% growth for the following year, the 1990 graphics revenue estimate was 533.5 million Bfr ($13.34 million). The 15 month revenue estimate was thus 640.7 Bfr ($16.02 million), of which 80%, or 512.56 million Bfr ($12.8 million), could be assumed to be sales of the BG400. A 30% loss in sales of the BG400 would total 153.8 million Bfr ($3.85 million), while a 60% loss would total 307.5 million Bfr ($7.69 million).

The French distributor, too, was experiencing market pressure to announce a price decrease on the BG400. In the U.S. market, however, the distributor was adamantly opposed to lowering the price. Regional Marketing Manager Sjoerd de Clerck had described the reasoning behind this opposition:

> It goes without saying that Barco can not win a price war against Sony. Lowering our price might drive Sony to lower theirs further, and we could not follow. We might never be able to recover our price positioning on graphics machines. In addition, a drastic price drop would damage our reputation among recent, and hopefully repeat, BPS customers. Our only option is to develop a competitive projector.

Frans Claerbout was concerned about moving too quickly to lower the BG400 price—in markets where Sony was not coming out strongly, it would be the equivalent of giving away profit. He wanted to wait on confirmation of the Sony price before making any pricing decisions. In direct contrast, Dursin felt strongly that BPS should preempt the pricing of the 1270.

Product Development Options

The team also had a series of product development options to consider in light of the Sony 1270 introduction. Early in 1989, BPS' development plan had been sketched out according to the division's expectations of increased competition in the data segment of the marketplace. The plan called for the introduction of the digital BD700 by October, followed by the development of the digital BG800 for a late 1990 introduction. Twenty-seven man months were required to complete the BD700 project, while 180 man months had already gone into the project. In addition, BPS engineers were working concurrently on four other projector-related projects.

BPS could continue along its development schedule as planned, introducing the BD700 on time in October for immediate production and delivery. The projector was BPS' first digital model, and also incorporated an improved generator and a scanning frequency of 64 kHz. Sales of the BD700 in 1990 were expected to show an increase of 25% in incremental sales over the forecasted revenue of the BD600, representing some 171.7 million Bfr ($4.3 million)[5]. By September, BPS' German distributor and several others already had orders for the BD700, priced at 640,000 Bfr ($16,000), on their books. Claerbout understood the importance of the on-time completion of the BD700 project, for both his engineers' morale and his customers. At the same time, however, the BD700 would not beat the performance of the 1270 at Infocomm in January 1990.

Alternatively, BPS could use the advances made in the BD700 development as a springboard to a digital graphics projector. Dejonghe estimated that BPS engineers could develop a graphics version in two to three months, working from the BD700's chassis, tubes, and lenses, with the sole addition of higher scanning frequency to match that of the 1270. If this option were pursued, the introduction of the BD700 would have to be postponed until December, causing delay in the delivery of the projector to advance-order customers. Also, with BPS' standard 7" tube, the digital graphics projector would still be inferior to the 1270 in terms of light output, picture quality, and resolution.

---

[5] Data revenues were predicted to reach 912.7 million Bfr ($22.8 million) in 1989, and, assuming 12.3% growth for the next year, 1,025 million Bfr ($25.6 million) in 1990. Sixty-seven percent, or 686.8 million Bfr ($17.2 million) in 1990, could be assumed to be sales of the BD600. The BD700 was expected to increase data sales 25% over the BD600, representing 171.7 million Bfr ($4.3 million).

BPS' third option was to turn immediately to the development of the BG800. As originally planned, it was to be a digital upgrade of the BG400. Faced with the threat from Sony, however, the BG800 now had to be designed to surpass the 1270's performance. This would require a scanning frequency well above that of the 1270's—at least 90 kHz—as well as the incorporation of the Sony 8" tube for the best possible performance. Dejonghe had received confirmation from Sony Components that it would be willing to start supplying the tube immediately. The 8" tube required a special lens, however, and BPS' traditional lens supplier, U.S. Precision Lens of Cincinnati (USPL), had no compatible product. Although in the past Barco and Sony sourced lenses from the same supplier, Sony had worked with a Japanese firm, Fujinon, to develop the lens that appeared in the 1270. Dejonghe was not sure that Fujinon would supply Barco as well.

Claerbout estimated that the development of the BG800 with at least 90 kHz of scanning frequency and new tubes would require at least 80 man-months. In addition, he felt strongly that the projector would have to be ready in time for Infocomm if it was to be effective against the 1270. Meeting that deadline would require the cessation of all other BPS development projects from October 1 on, including the BD700. He voiced a number of concerns about committing BPS' resources to such a drastic move:

> My engineers have been working overtime on the development of the BD700 since mid-summer. Now, we're considering a move that would require the indefinite postponement of the BD700 project, and an even greater commitment on their part. Overtime would be a given, but they'd also have to be willing to give up vacation days until Infocomm at least. We have the capability to produce a great machine, and a machine that is superior to the 1270. But the compression of its development could have repercussions on the quality of the final product. In addition, we don't know yet when the 1270 will actually hit the marketplace, how it will be priced, or how the customers will respond to it.

In addition to these considerations, Claerbout gave the BG800 only a 40% chance of making the Infocomm deadline.

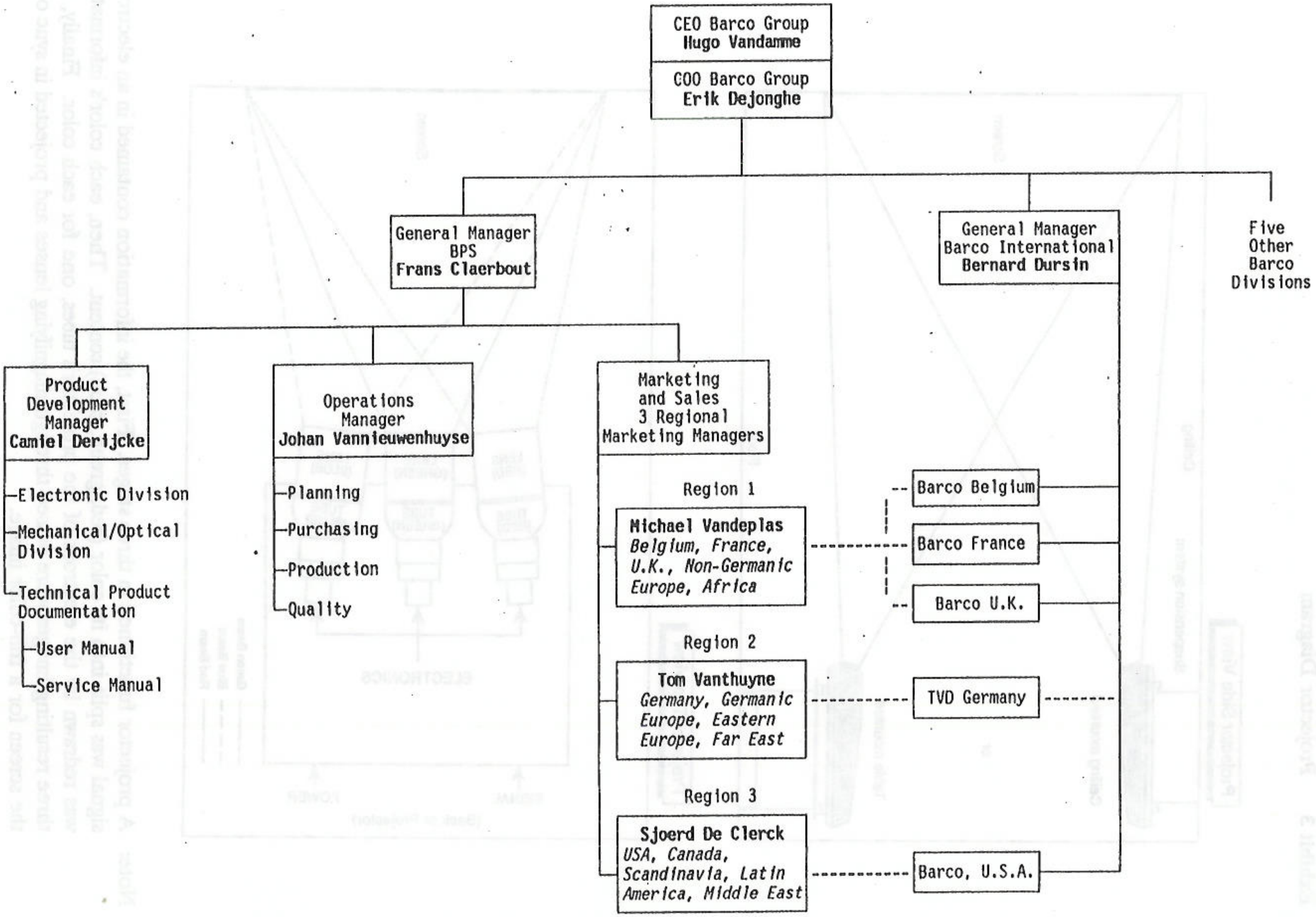
Exhibit 1 Key BPS Financial Data, 1988-1989 (in millions of Bfr)

	1988 *Bfr*	*$US*	1989e *Bfr*	*$US*
Turnover[a]	1,387	34.7	1,983	49.6
Direct production costs	772	19.3	815	20.4
Total production overhead	40	1.0	45	1.1
Marketing and R&D	130	3.3	170	4.3
Depreciation and charges	138	3.5	329	8.2
Income before taxes	307	7.7	624	15.6

Source: BPS

[a] In addition to sales of video, data, and graphics projectors, BPS turnover recorded sales of projector accessories. In 1988, this category amounted to 168.5 million Bfr ($4.2 million); in 1989 it was 239.3 million Bfr ($6 million).

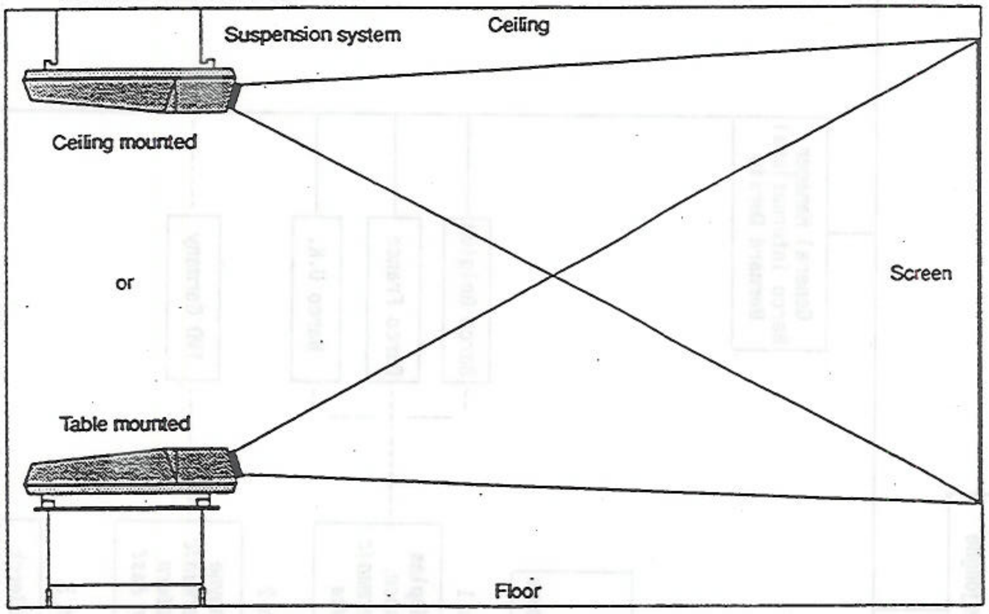
Exhibit 2 The Management of Barco Projection Systems, 19


CEO Barco Group
Hugo Vandamme
COO Barco Group
Erik Dejonghe
General Manager
BPS
Frans Claerbout
General Manager
Barco International
Bernard Dursin
Five
Other
Barco
Divisions
Product
Development
Manager
Camiel Derijcke
Electronic Division
Mechanical/Optical
Division
Technical Product
Documentation
User Manual
Service Manual
Operations
Manager
Johan Vannieuwenhuyse
Planning
Purchasing
Production
Quality
Marketing
and Sales
3 Regional
Marketing Managers
Region 1
Michael Vandeplas
Belgium, France,
U.K., Non-Germanic
Europe, Africa
Region 2
Tom Vanthuyne
Germany, Germanic
Europe, Eastern
Europe, Far East
Region 3
Sjoerd De Clerck
USA, Canada,
Scandinavia, Latin
America, Middle East
Barco Belgium
Barco France
Barco U.K.
TVD Germany
Barco, U.S.A.

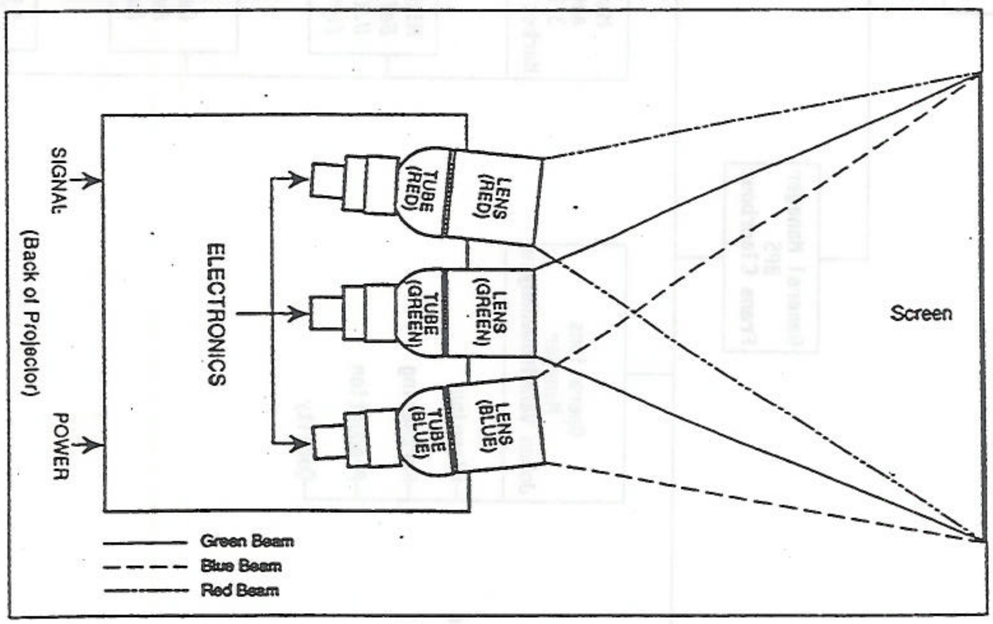
Note: Non wholly-owned distributors not shown here reported jointly to Barco International and the appropriate regional [illegible] manager

Exhibit 3 Projector Diagram

Projector Side View

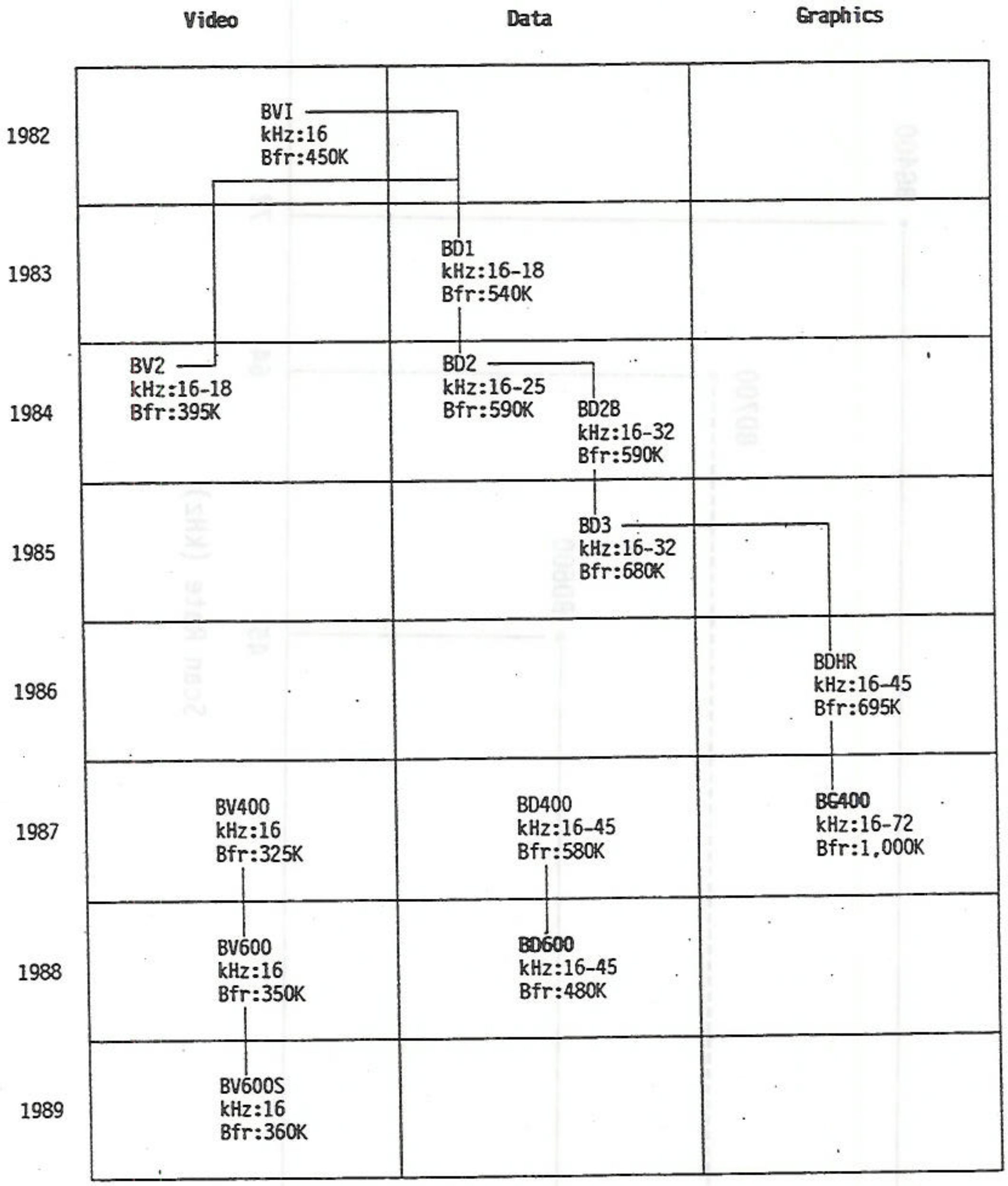

Suspension system
Ceiling
Ceiling mounted
or
Table mounted
Screen
Floor

Projector Top View


SIGNAL
(Back of Projector)
POWER
ELECTRONICS
TUBE (RED)
LENS (RED)
TUBE (GREEN)
LENS (GREEN)
TUBE (BLUE)
LENS (BLUE)
Screen
Green Beam
Blue Beam
Red Beam

Note: A projector functioned in three stages. First, the information contained in an electronic signal was split into its color (red, green, blue) content. Then, each color's information was redrawn by the electrons of the projector's tubes, one for each color. Finally, the three resulting images were passed through magnifying lenses and projected in sync onto the screen for a full-color image.

Exhibit 4 BPS Product Evolution, 1982-1989



	Video	Data	Graphics
1982	BVI kHz:16 Bfr:450K		
1983		BD1 kHz:16-18 Bfr:540K	
1984	BV2 kHz:16-18 Bfr:395K	BD2 kHz:16-25 Bfr:590K BD2B kHz:16-32 Bfr:590K	
1985		BD3 kHz:16-32 Bfr:680K	
1986			BDHR kHz:16-45 Bfr:695K
1987	BV400 kHz:16 Bfr:325K	BD400 kHz:16-45 Bfr:580K	BG400 kHz:16-72 Bfr:1,000K
1988	BV600 kHz:16 Bfr:350K	BD600 kHz:16-45 Bfr:480K	
1989	BV600S kHz:16 Bfr:360K		

Source: BPS

Note: This diagram contains principal 7" projector introductions only; modifications and special-application projectors are not included.

Exhibit 5 . Barco's Product Positioning, August 1989 (pre-Biggraph)

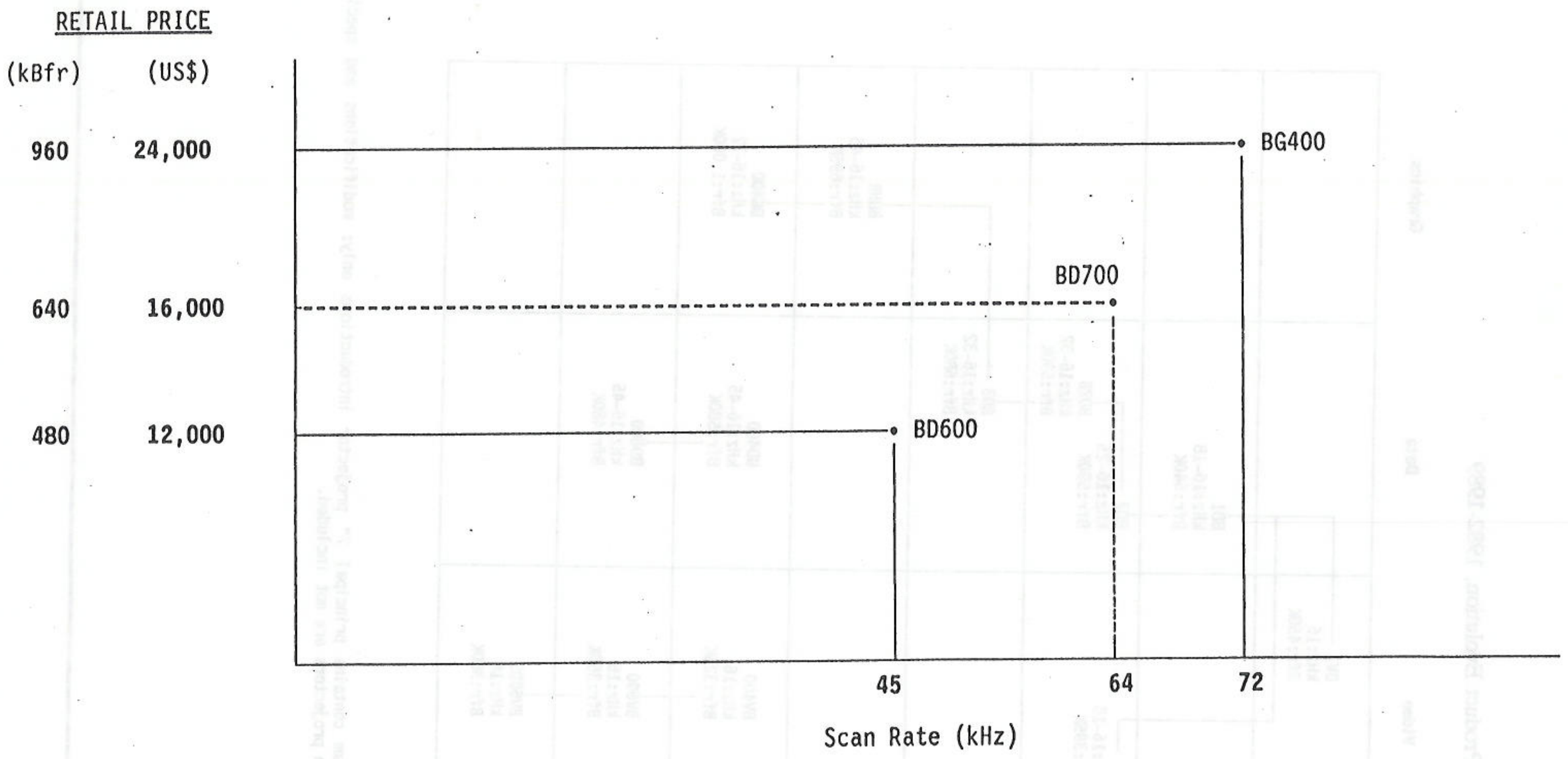


Exhibit 6 Products of the Major Manufacturers, August 1989

Manufacturer	Model	Scan Rate (kHz)	Light Output (lumens)	Resolution (# lines)	Retail Price (Bfr)	Retail Price (US$)
BARCO	BD600	16-45	600	1,600	480,000	12,000
	BG400	16-72	400	2,000	960,000	24,000
SONY	VPH1031	16-35	300	1,100	420,000	10,500
ELECTROHOME	ECP2000	16-36	400	1,280	344,000	8,600
	ECP3000	16-50	650	1,280	580,000	14,500
	ECP4000	16-70	650	1,280	960,000	24,000
NEC	DP1200	16-35	475	800	420,000	10,500
	GP3000	16-54	600	1,100	640,000	16,000

Source: BPS

Note: Light output and resolution were used in addition to scan rate to measure a projector's performance on the world marketplace. Brightness increased with the number of lumens, however the human eye could discern only large increases; for example, the eye perceived a 1,000 lumen projector as 50% brighter than a 100 lumen projector. With resolution, the larger the number of lines, the better the quality of the final image. Barco believed that its projectors had the highest light output of all the competitors, however, due to differences in the standards used to calculate lumens, light output was difficult to compare between companies.

Telex :

I'VE GOT A SWATCH
Watch design ©

589-005-1N

SWATCH

by *Christian Pinson*

2097/1083/00011

This case was prepared by Helen Chase Kimball, Research Associate, under the supervision of Christian Pinson, Associate Professor at INSEAD. It is intended to be used as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. This case is based on a real life situation, therefore some names and figures have been disguised. It was partly inspired by a report prepared by R.J. Burnett, INSEAD MBA student. Copyright ©1987 INSEAD-CEDEP

It was mid-1986 and Chris Keigel had only recently returned from military service to become European Marketing Manager for Swatch, the new watch concept that had revolutionized the watch industry and brought Swiss watchmaking out of a forty-year slump. He knew that Swatch management in Biel, Switzerland was concerned about maintaining sales growth and agreeing on long-term international strategy. Existing watch brands were renewing their strategies and new competitors inspired by Swatch were mushrooming worldwide. Chris Keigel had been requested to gather background information for an upcoming top management meeting called to arrive at a consensus on the very concept of Swatch, its international positioning and viable product line extensions.

Company Background

Swatch watches were manufactured by ETA S.A., a century-old Swiss watch movement firm and a subsidiary of SMH (Société Microinécanique et Horlogère), the world's second-largest watchmaking concern after the Japanese firm, Seiko. SMH was the result of a merger in 1983 between ASUAG (Allgemeine Schweizer Uhrenindustrie), and SSIH (Société Suisse pour l'Industrie Horlogère), Switzerland's two major watch manufacturers rescued from bankruptcy by the major Swiss banks. In addition to Swatch, the SMH product line included the well-known brands Omega, Longines, Tissot and Rado. Swatch A.G. was a subsidiary set up in 1984 to handle the international marketing of Swatch watches. Its Executive Committee was composed of President E.T. Marquardt, Vice President American Operations Max Imgrüth, Vice President Continental Operations Felice A. Schillaci and Vice President Australian Operations H.N. Tune.

Watch Technology

Until the late fifties, all watches were *mechanical*, i.e. spring-powered, with movements comprising a hundred or more parts. In 1957, the first electric watch was marketed in the United States. A few years later, the American firm, Bulova, developed a *tuning-fork* watch, battery-powered and accurate to within one minute per month. The *quartz*, i.e. electronic watch, was invented in Switzerland in 1968 but first marketed in the United States by Hamilton. It improved accuracy to unheard-of levels. The quartz watch display was either of the traditional "analog" type with hands moving around a face, or "digital" with numbers appearing in a frame. Table 1 gives a rough description of the components of four watch types.

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TABLE 1 - *MAJOR COMPONENTS OF FOUR WATCH TYPES*

	Mechanical	*Tuning fork*	*Quartz Digital*	*Quartz Analog*
Energy source	Hairspring	Battery	Battery	Battery
Time base	Balance-spring	Tuning fork	Quartz crystal	Quartz crystal
Electronic circuit	-	Simple	Integrated circuit	Integrated circuit
Transmission	Gears	Gears	Gears	Stepping motor/gears
Display	Hands	Hands	Numbers	Hands

The first digital watches used either light-emitting diodes (LED's) or a liquid crystal display (LCD) which consumed less energy. By 1986, most quartz digital watches had LCD's. The switch to quartz was spectacular: whereas 98%of all watches and movements produced in 1974 were mechanical and only 2%were quartz, in 1984 the breakdown was 24%mechanical and 76% quartz.

The Watch Industry

Watchmaking was first developed in Switzerland by Swiss goldsmiths and French Huguenots fleeing religious persecution during the Reformation. During the Industrial Revolution the Swiss industry branched into a two-tier system with component manufacturing separate from watch assembling. Swiss watchmakers were masters of precision workmanship and "Swiss made" had be come synonymous with quality. By 1970 however, the Swiss contribution to world watch production had dropped considerably. This trend continued into the eighties as less expensive and more accurate quartz watches and movements, mainly from Japan and Hong Kong, flooded the market. In 1984, 60%of quartz watches and movements produced were from Hong Kong, 30%from Japan and only 7%from Switzerland.

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TABLE 2 - *ESTIMATED BREAKDOWN OF WORLD WATCH PRODUCTION*

	*World Production**	*Switzerland*	*Japan*	*Hong Kong*	*USA*	*Rest of world*
1948	31	80 %	-	-	-	20 %
1970	174	43 %	14 %	-	11 %	32 %
1975	218	34 %	14 %	2 %	12 %	38 %
1980	300	29 %	22 %	20 %	4 %	25 %
1985	440	13 %	39 %	22 %	0.4 %	25 %

* million watches and movements
Source: Federation of the Swiss Watch Industry

Starting in the fifties, the production operations of the major American firms (Timex, Bulova, Hamilton) gradually shifted overseas. By 1986, domestic production was considered virtually nil. While Switzerland's estimated contribution to American import volume decreased from 99%in 1950 to 4%in 1984, the percentage of import volume from Asia increased from 10% in 1970, primarily from Japan, to 92%in 1984, mostly from Hong Kong.

The Japanese industry was highly concentrated with the two major firms, Hattori Seiko and Citizen, stressing the development of automated production lines and maximum vertical integration of operations. Compared with the multitude of Swiss watch brands, the combined product lines of these two plus Casio, the third major Japanese watchmaker, did not exceed a dozen brands. In contrast, the industry in Hong Kong was highly fragmented, with several manufacturers producing 10-20 million watches per year, and hundreds of small firms producing less than 1 million annually. These firms could not afford to invest in quartz analog technology but with virtually no barriers to entry for watch assembly, they produced complete analog watches from imported movements and modules, often Swiss or Japanese. Design costs were also minimized by copying Swiss or Japanese products. The competitive advantages of the Hong Kong firms were low-cost labor, tiny margins and the flexibility to adapt to changes in the market.

The spectacular rise of Japan and Hong Kong, particularly in the middle and low-price categories, was primarily due to their rapid adoption of quartz technology, a drive to achieve a competitive cost position through accumulation of experience, and economies of scale. Whereas in 1972 the digital

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watch module cost around $200, the same module cost only $.50 in 1984. The Asian watchmaking industry had been ensuring a chronic state of world oversupply, mainly in the inexpensive quartz digital range. This had been the cause of a number of bankruptcies and had incited watch manufacturers to turn to the quartz analog market where added value was higher. Since in contrast to quartz digital technology, quartz analog technology was available only within the watch industry, the hundreds of watch assemblers scattered throughout the world were increasingly dependent on the three major movement manufacturers, Seiko, ETA and Citizen.

The Watch Market

According to one industry analyst, the European OECD member countries represented around 30 %of total world watch sales volume, the United States approximately 20-30 %and the Japanese market around 10 %. Estimated annual market growth was approximately 4 %.

Industry experts estimated 1984 wristwatch purchases in the United States to be 90-95 million units, a 400 %increase over 10 years. By 1985 Americans were buying a new watch once every two years compared with once every 6-10 years a decade earlier. However, the US market was considered to be near saturation with an average of 3.5 watches per owner. Buying habits had changed in Europe also with the 8-20 year age group representing nearly half of all watch sales in 1985. When commenting on buying habits, industry experts pointed out that the industry was increasingly committed to the quartz analog, stressing the different meanings the digital and the analog had for the consumer (Exhibit 1). However, some of the more expensive Swiss watch manufacturers seemed to believe in a future trend back to mechanical.

The watch market was generally divided into five retail price segments (Table 3). Swiss watches fell mostly in the mid- to expensive price ranges. To protect its mid-price niche, Seiko had adopted a multibrand strategy, offering cheap watches under the Lorus, Pulsar and Phasar brands with more expensive watches under the Credor, Seiko and Lassale brand names.

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TABLE 3

WATCH INDUSTRY PRICE SEGMENTS (SF) - 1984

Segment	*Retail Price*	*% Units*	*% Value*	*Examples*
A	8-30	60 %	10 %	Hong Kong LCD's, some cheap mechanicals
B	30-100	15 %	15 %	Swatch, Timex, Casio, Guess, Lip, Lorus, Dugena, Junghans, Yéma, Jaz, Pulsar, Hamilton
C	80-250	20 %	45 %	Tissot, Seiko, Citizen, Casio, Lip, Yéma, Jaz, Pulsar, Dugena, Junghans, Bulova, Hamilton, Herbelin
D	120-450	4 %	15 %	Omega, Longines, Eterna, Seiko, Citizen, Certina, Rado, Movado, Bulova
E	450+	1 %	15 %	Rolex, Piaget, Cartier, Audemars Piguet, Certina, Rado, Lassale, Ebel

$/SF exchange rates: 1983 = 2.10, 1984 = 2.20, 1985 = 2.30, 1986 = 1.84

Source: compiled from Federation of the Swiss Watch Industry records

Development of Swatch

Dr. Ernst Thomke joined ETA S.A. as president in 1978 after proving his success in the marketing department of Beecham Pharmaceuticals. He had been an apprentice in the production division of ETA before taking a PhD in chemistry and a medical degree. In early 1980, after considering the sorry state of the Swiss watch industry, Thomke concluded that the future was in innovative finished products, aggressive marketing, volume sales and vertical integration of the industry. Quartz analog technology was more complex than digital, but as ETA was known for the technology it possessed for the production of high-priced, ultra-thin "Delirium" movements, Thomke decided to develop a "low-price prestige" quartz analog wristwatch that could be mass produced in Switzerland at greatly reduced cost. Two ETA micromechanical engineers specialized in plastic injection molding technology, Jacques Müller and Elmar Mock, were given the challenge of designing a product based on Thomke's concept. This required inventing entirely new production technology using robots and computers for manufacture and assembly. By 1981 a

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semi-automated process had been designed to meet Thomke's goal of a 15 SF ex-factory price and seven patents were registered. The watch's movement, consisting of only 51 instead of the 90-150 parts in other watches, was injected directly into the one-piece plastic case. The casing was sealed by ultrasonic welding instead of screwed, precluding servicing. The watch would be simply replaced and not repaired if it stopped. The finished product, guaranteed one year, was shock resistant, water resistant to 100 feet (30 meters) and contained a 3-year replaceable battery.

In April 1981 Thomke took his idea to Franz Sprecher, a marketing consultant who had worked at Nestlé before setting up his own consulting firm. As background for ETA's project, Sprecher studied prestige products like perfumes, successful mass market brands like "Bic" and both designer and ready- to-wear fashion. He worked closely with advertising agencies in the United States on product positioning and advertising strategy. In addition to the name "Swatch", a snappy contraction of "Swiss" and "watch", this research generated the idea of downplaying the product's practical benefits and positioning it as a "fashion accessory that happens to tell time". Swatch would be a second or third watch used to adapt to different situations without replacing the traditional "status symbol" watch.

Launch

Dr. Thomke arranged to have Swatch distributed in the United States by the Swiss Watch Distribution Center (SWDC) in San Antonio, Texas, an American firm in which ETA held a minority interest and whose chairman, Ben Hammond, had been instrumental in setting up and building Seiko distribution in the Southwestern states. Swatch was test marketed in December 1982 at 100 Sanger Harris department stores in Dallas, Salt Lake City and San Diego, without any advertising, public relations or publicity. The original test product line consisted of 12 rather conventional watches in red, brown and tan. Opinions on test results were mixed but the ETA team continued undaunted. Swatch was officially launched in Switzerland in March. 1983 and then gradually worldwide. Exhibit 2 shows the Fall 1983 collection as pictured in sales brochures.

Max Imgrüth, a graduate of the State University of New York's Fashion Institute of Technology, took over as President of SWDC in April, 1983 and arranged a second test market in December, 1983 through both the Zale jewelry chain in Dallas and the New York department store Macy's, with television support created by Swatch's advertising agency, McCann-

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Erickson. Test market conclusions were that most of the watches in the 1983 Fall/Winter collection were not acceptable for the US market. Imgrüth recalled:

> "Nothing happened. I tried to figure out what was wrong. The product was not very distinctive. It was not just the ad, it was the watches. It was too close to the traditional watch. First of all it was its positioning, second the product, third pricing, fourth advertising. Basically, I ran down the marketing mix."

Imgrüth became increasingly involved in product design and local adaptation of Swatch communication. He was appointed President of the newly created American subsidiary Swatch Watch USA in early 1984. The American pricing strategy was modified and a direct sales force organized to replace SWDC that year. Managers hired to run Swatch Watch USA included Vice President Operations Don Galliers, formerly in the watch strap business, and Marketing Manager/Creative Director Steve Rechtschaffner, 27, a former member of the US freestyle skiing team with experience in sales promotion. Exhibit 3 gives the perceived advantages and disadvantages of Swatch, in December 1984, in four countries.

Price

There were initially three prices for the Swiss launch: 39.90 SF for a model with only two hands, 44.90 SF for three hands and 49.90 SF for three hands and a calendar display. In the United States however, Swatch was first marketed at seven price points ranging from $19.95 to $37.50. Consumers did not seem to understand why certain watches cost more than others so American prices were reduced to three in 1984: $25, $30 and $35. In 1986 one Swatch retail price was set throughout the world, based on the price in the United States of $30.00. Exhibit 4 presents the results of a survey on perceptions of Swatch retail prices in four countries.

From the start Thomke and Sprecher had decided that product contribution would have to be sufficient to finance massive communication. Manufacturing costs had been reduced substantially and wholesaler and agent margins could be decreased some. Retail margins would have to be kept high enough to motivate retailers. Table 4 gives a comparison of costs and margins for traditional moderate price Swiss and Japanese watches, low price Hong Kong watches, and Swatch in 1982-1983.

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TABLE 4-*BREAKDOWN OF LOW TO MODERATE PRICE WATCH COSTS AND MARGINS*

	Swiss	*Japanese*	*Hong Kong*	*Swatch*
Retail price = 100 %	100 %	100 %	100 %	100 %
- (Retail margin)	(50 %)	(55 %)	(50 %)	(45 %)
Wholesale price	50 %	45 %	50 %	55 %
- (Wholesale/agent margin)	(25 %)	(16 %)	(18 %)	(11 %)
Ex-factory price	25 %	29 %	33 %	44 %
- (Contribution)	(4 %)	(12 %)	(3 %)	(24 %)
Manufacturing cost	21 %	18 %	29 %	20 %

Source: company records

Product Line

Two Swatch collections of 12 different models each were marketed per year, in Spring and in Fall. Styles were based on four major target groups geared to social behavior and trends: "classic", "hi-tech", "sports" and "fashion". Collections were designed by Käthi Durrer and Jean Robert in Zurich with fashion consultants in New York, Milan and Paris. At first there was only one large-size model, enabling mass production. In 1984, a smaller size was added. Limitation of sizes to these two enabled substantial reductions in production costs. Variations in the collections were made possible through face and watchband graphics and style. In the Spring of 1984, Max Imgrüth decided to name individual watches (e.g. "Pinstripe", "Black Magic", "Mc-Swatch", "Dotted Swiss") and tie each collection in with specific themes starting with the "Skipper" line of sailing-inspired sport watches. Subsequent themes ranged from "Street Smart" paisleys and plaids to "Kiva" American Indian designs. Exhibit 5 illustrates selected watches from the 1984-1986 collections.

By Fall 1984, Swatch management realized that a continuous system for pre-testing the 80 to 100 models presented by the designers for each collection was essential for constant collection renewal. Franz Sprecher commented:

> "The strategy should be to create bestsellers. This doesn't mean keeping the same collection for five years but improving the collection by identifying weak models and knowing whether to revamp them or create new models that will be leaders."

The collection illustrated in Exhibit 6 and including the three scented "Granita

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di Frutta" models[1], was pre-tested in December 1984. Test results, presented with the actual ex-factory sales figures for the collection, revealed no significant differences between the four countries involved.

Distribution

Until the mid-1970's most medium and high-priced watches were sold through jewelry and specialist shops. The Swiss watchmakers, later followed by Seiko, had always placed emphasis on after-sales service and set up dealerships allowing jewelers to take up to 250 %markups. As prices slipped however, a grey market[2] developed, fired by a drive for volume and a lack of control over distribution channels.

In the United States (Exhibit 7), Swatch watches were sold primarily in "shop-in-shops" at up-market department stores, some specialized watch retailers, sports shops and boutiques while in Europe, Swatch was sold by the few existing up-market department stores but mostly by traditional jewelers and some specialized sports, gift and fashion boutiques, mail order houses and duty-free shops. In France, as part of his launch strategy, the Swatch distributor Raymond Zeitoun, previously with Seiko, persuaded the prestigious jeweler Jean Dinh Van on rue de la Paix in Paris to sell Swatch for a few days. When the jeweler accepted "for the fun of it" and sales boomed, others followed suit. Zeitoun spoke of Swatch in France:

> "Granted, it's an item without much of a margin but the profession has to change and widen its horizons. The advantage of Swatch is that it brings a lively atmosphere and a younger clientele to the store."

Discounting by distributors was not allowed and the trade was warned to keep an eye out for counterfeits (Exhibit 8). Swatch Watch USA spent close to $1 million in 1984 to buy back Swatches displayed at less than the set price.

Don Galliers recalled:

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[1] a line of aromatic Swatches geared to the teenage consumer and consisting of pastel pink, blue and yellow watches emitting strawberry, mint and banana fragrances; it represented 80 %of sales in the United States for the first two months of 1985.

[2] parallel importing and distribution through unauthorized channels

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> "We purchased 80-85 %of the grey market watches. Counterfeits appeared in 1985. We set up an international brand protection program with a very sophisticated information network. All new styles were copyrighted, counterfeiters caught at the source and "confusingly similar" watch marketers taken to court. If we were spending $16-$18 million a year on advertising, we could spend a couple of million to protect the brand."

Merchandising was considered fundamental and included sales promotional activities designed to catch the consumer's eye. Backed by 2-meter "maxi-Swatches", expensive and carefully designed display racks were "colorblocked", i.e. arranged in rows of color. In-store videos played pop or rock music and sales brochures were available in ample supply. In all countries, parties for the trade were organized for each collection launch to create a feeling of a "Swatch Club" encouraging retailers to give Swatch prime window space and exposure in spite of lower margins. One of Swatch's selling points with distributors was its very low return rate[3](i.e. 0.3 %in 1984 compared with the industry average of 5 %) which virtually eliminated after-sales service problems and customer dissatisfaction.

In general, the attitude of the distributors towards Swatch watches was very positive with the few negative comments limited to low profit margin, production-related delivery problems, scepticism about long-term success and lack of distributor exclusivity. Don Galliers commented on Swatch's distribution strategy in the United States:

> "Swatch's success was built on limited distribution. We should not sell more than 5 million Swatches in the United States in any single year, to keep it rare, in demand. You can't always get what you want so when you see it you'd better buy it. For a trendy article like this, if you accelerate too much into the market you risk making it become a fad."

---

[3] percentage of watches returned on warranty

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Product Line Extensions

While its major competitors, Seiko, Citizen and others were diversifying into other applications of electronics and "superwatches" complete with televisions, computers or health monitoring systems, Swatch, mainly through the initiative of Swatch Watch USA, had moved into a range of accessories and ready-to-wear apparel (Table 5) designed to express a "Swatch" lifestyle (Exhibit 9).

One of the reasons given for expanding into accessories and apparel was the need to fill out the available space in the shop-in-shops. "Funwear" and "Fungear", manufactured in Hong Kong and the USA, were designed by Renée Rechtschaffner, Steve's wife and the winner of a Swatch-organized contest at the Fashion Institute of Technology. By the last quarter of 1985, non-watch items accounted for one third of Swatch sales in the United States. Aided awareness scores for Swatch accessories available only in the United States are presented in Exhibit 10.

TABLE 5-*SWATCH CLOTHING AND ACCESSORIES*

Date	*Product*	*Description*	*Retail Price*
Fall 1984	Swatch Guard	Protective, decorative device for watches	$3
Fall 1984	Maxi-Swatch	2 meter Swatch wall-clock	$150
Spring 1985	Shields	Sunglasses	$35
Spring 1985	Chums	Eyeglass holders	$5
Spring 1985	Signature line	Umbrellas, T-shirts, sweats with watch graphics	$12-38
Spring 1985	Gift set	Keyholder and Swiss pen-knife	$45
Spring 1985	Parafernalia	Italian pens, stationery items, key rings, safety razors	$7-15
Fall 1985	Fungear line	Knapsacks, belts, bags	$10-65
Fall 1985	Funwear line	Unisex casual wear (pants, tops, sweats, shirts, shorts, skirts) linked to watch themes	$12-65

Fashion retailing in the United States was stimulated by six "Market Weeks" per year to launch each new season (i.e. spring, spring-summer, summer, back-to-school, fall-winter, holiday) and introduce products to retailers nationwide. At Swatch Watch USA, preparation of each market week began almost a full year in advance with market and sales analyses, fashion forecasts

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and theme development (watches and accessories) covering approximately two months for each season followed by gradual decisions and presentations throughout the rest of the year on design, color, prints, prices, quantities, range, advertising, public relations and promotion. Coordination of production and delivery with "fickle fashion" was tricky business that relied on very short lead times. Perpetual innovation was also difficult to maintain. Don Galliers commented:

> "We don't have the flexibility of the traditional watch industry where if you miss it this year you can launch it next year. We also don't have the normal 18-month development time to field the watch after a one-year design time. Our whole cycle is built on the concept that every six weeks there is something new at the Swatch counter."

In the spring of 1986, under license from the Coca Cola company, the American subsidiary also started marketing a line of Coca Cola watches. They contained traditional ETA and not Swatch technology quartz movements and did not bear the name Swatch.[4]

Communication

Thomke and Sprecher had adopted a global communication strategy for Swatch to establish a distinctive brand personality. The company issued strict directives on use of the Swatch logo, baselines, layout and the Swiss cross. The Swatch communication budget was split more or less evenly between advertising/store promotion (50 %) and public relations/special events (50 %). Local agencies were in charge of public relations, promotion, publicity and special events including contests, concert tours and sports events. McCann- Erickson in Zurich was in charge of all advertising, designed for local adaptation in different countries through the use of voice-overs for commercials and strips of copy in the respective languages for print ads (Exhibit 11). Roger Guyard, Regional Manager for France, explained:

> "We want to have a global image with the same image in England as in Australia. Where we are different from the others is in our launch events and promotions, adapted to each country and each population."

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[4] Another SMH subsidiary, Endura S.A., manufactured private label and promotional watches with conventional movements.

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The Swatch communication target audience was described by McCann-Zurich as "all men and women between 15 and 39 years of age, particularly between 20 and 29, opinion leaders/trend-setters, extroverts who were nonetheless group-dependent, young fashion wearers and both active and passive sports fans". For Felice Schillaci, Vice President Continental Operations, Swatch was "a brand for the young at heart, no age group, no 18 to 29, it's a state of mind, an attitude".

Public Relations

Heavy emphasis was placed on testimonials and endorsements by opinion leaders as well as special events including sponsoring of musicians and artists, exhibitions and competitions at which gadgets, leaflets and "Swatch Magazines' ' were distributed (Exhibit 12). Swatch promotion was often unsolicited such as when Lady Diana wore not only her husband Prince Charles' watch at a polo match but also two Swatches, just when Swatch was introducing the ideas of man-size watches for women and "multiple Swatch accessorizing". Swatch also benefited from massive publicity through the press. According to Elmar Mock:

> "Management's stroke of genius was not to hide its engineers. We were on great terms with the newspapers who created an advertising effect, quite naturally, without the slightest solicitation."

Limited edition watches were launched with elaborate parties. The first was designed by Kiki Picasso and distributed to 100 celebrities at a cocktail party in Paris. There was the diamond-studded "Limelight" ($100) available in both Europe and the United States. Then there were the Breakdance watch ($30) and four watches designed by New York artist Keith Haring ($50) marketed in the United States only. Swatch's French public relations agency claimed that the strategy behind these serial watches was to manage the product ion-related scarcity by "creating a frenzy through rarity". Organization of advertising and events revolved around the development of a "Swatch cult" and using connections. In 1984, for instance, Max Imgrüth organized a celebrity advertising campaign through a photographer in California who persuaded a number of stars to be in Swatch ads in exchange for a Rolex or Piaget gold watch. These included Lauren Hutton, Donna Mills, Lee Majors and Ivan Lendl.

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Advertising

Swatch advertising and promotion budgets are given in Exhibit 13 with industry media expenditure in the United States. Don Galliers explained that Switzerland had a strict policy whereby roughly 30 %of the product's retail price would go to advertising. Swatch advertising relied primarily on films for television and cinema (Exhibit 14). Print ads, accounting for approximately 1/3 of total advertising expenditure, were used worldwide to reinforce awareness of each collection and current trend themes. They ran from April to June and from September to December every year. Swatch print media plans included sport, fashion and avant-garde magazines (e.g. Vogue, Elle, Cosmopolitan, Sports Illustrated, L'Equipe, Rolling Stone, The Face, City) as well as magazines geared to the young (e.g. Just 17, Jacinte, Mädchen, Seventeen) and occasionally general news publications (e.g. Stern, Der Spiegel, Figaro Magazine, Tiempo).

Swatch Watch USA had an in-house department that adapted the McCann ads and created its own ads (Exhibit 15). Max Imgrüth commented on global advertising:

> "We adapted the spots in a way that made sense, different wording, cut them a little bit with McCann here, knowing full well that what the Swiss wanted to achieve, a brand created and sent in directly from Switzerland, was impossible. A watch is not consumed like Coca Cola. It is not a daily need. This is emotional and you have to play local emotions."

Felice Schillaci explained that the loyal Swatch customer in the United States fell in the 10-16 age bracket. Reliable data on the Swatch buyer profile in Europe were not available but buyer age group brackets in the United Kingdom were estimated to be 20 %under 18, 40 %between 18 and 24, 30 % between 25 and 34 and 10 %over 34. Management in the United States felt that by catching consumers at an early age they would stick with Swatch as they grew up and the enthusiasm they generated would rub off on those older. By 1986 in New York City and Los Angeles, where Swatch awareness was at a maximum, Swatch Watch USA had limited television commercials to MTV[5] to avoid oversaturation. A firm specializing in TV and radio youth audience surveys conducted an analysis for Swatch of American consumers, based on interviews in 15 cities and including reactions to a random sample of eight Swatch ads (Exhibit 16). Scores for recall of Swatch advertising in

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[5] a music video cable TV station watched primarily by 12-24 year olds

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five countries are presented in Exhibit 17. Watch brand awareness scores in the same countries are presented in Exhibit 18.

Competition

When asked to define the competition, Swatch management's responses varied. Swatch was generally credited with having opened up a new market niche (Exhibit 19). By 1986 however, the market was flooded with Swatch imitations, some bearing similar brand names e.g. Watch, Watcha, Swiss Watch, Smash, Swatcher, A-Watch, La-Watch, P-Watch, Q-Watch, Zee-watch as well as counterfeits using the brand name Swatch. Many Swatch imitations were produced in Hong Kong or Taiwan for distribution in the United States, Europe or other major markets. These could look strikingly similar to Swatch, some even similar in quality and very price-competitive, and the company was involved in a long series of legal proceedings to fight off the competition.

Timex, one of the companies worst hit by the LCD watch glut, had launched a line of colored fashion watches called "Watercolors", priced slightly below Swatch. Timex was also rumored to be preparing a new advertising campaign for its "Big-Bold-Beautiful" fashion watch line for women, introduced in the Summer of 1986 and targeted to an older age group than Swatch. According to one industry expert, the Timex range did not seem to have any "winners", at least in Europe. Seiko's Lorus line was expanded in 1984 to include "Swatch-like" fashion models, priced lower than Swatch and doing well when they had special design features. The first solar-powered wristwatch was also launched under the Lorus brand name in 1986. Competitors wondered however if Seiko was really committed to competing with Swatch since non- watch activities, e.g. personal computers, printers, audio and video equipment were to be increased to 30 %of worldwide sales by 1989. Don Galliers summarized the challenge in the United States:

> "If you want to take a significant market share away from the existing well-established brand, you have to spend three times the amount of advertising that brand spends. To kick us where we hurt worse, in delivery and depth, they'll have to build up $75 million worth of initial inventory, in addition to the $100 million investment in production facilities. That's one Hell of an investment!"

Citizen apparently did not feel it necessary to launch a Swatch-like product, preferring to focus on its specialization, digitals and technically sophisticated

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watches. At first Casio, specialized more specifically in calculators and extremely price-competitive multi-function digital watches, did not jump on the Swatch bandwagon either. In 1986, when the shift from digital to analog watches became apparent however, Casio launched "Color Burst", a line of quartz analog fashion watches, waterproof to 50 meters, retailing at less than the price of Swatch. Sales were reported to be rather disappointing.

Swatch management claimed that only the very large firms could compete with ETA on price and that smaller firms undercutting Swatch on price were left with virtually no margin to compete with Swatch's intensive communication. Swatch refused to enter into a price war with its competitors. According to Jacques Irniger, ETA Marketing Manager, Swatch spent more than double the watch industry's average ad spend for a *single* brand: "Competitors can copy our watch but not our media spend. They will also have trouble duplicating some of Swatch's promotional stunts." Examples of "Swatch-like" fashion watches with limited market response were the "Twist" by Accurist and the "American Graffiti" watch by Gillex in the United Kingdom. According to Ernst Thomke, "In an era when superbly accurate quartz watches sell for $10, the key is not technology but image." Exhibit 20 presents Swatch's image in five countries in 1986.

Brands explicitly positioned as fashion accessories varied from one country to another and it was difficult to obtain a global view of the situation as well as market share data to determine the relative threat presented by such brands. Designer watches (e.g. Gucci, Dior, Givenchy, Nina Ricci, Yves Saint Laurent, Ralph Lauren, Calvin Klein, Guy Laroche, Lanvin, Hermes, Benetton), although often in a different price range from Swatch, i.e. segments C and D (see Table 3), were a growing trend and the actual concept of "fashion watch" did not appear clear in consumers' minds. Responses to the question "Please tell me all the brands of fashion watches you can think of" included such diverse brands as Timex, Swatch, Bulova, Citizen and Rolex. Franz Sprecher's definition of a fashion watch was "a watch not only colorful but with accessorizing potential and meaning, a statement of the fashion trends at a specific period of time."

In Europe, moderate-price fashion watches included Kelton, an inexpensive French watch brand launched by Timex in the early sixties. After initial rejection by the traditional jewellers' network, Kelton had been very successfully distributed through mass distribution channels. The breakdown of Kelton sales in France was estimated to be 45 %from "tabacs" (registered tabacconists), 30 %from supermarkets and 25 %from department and va-

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riety stores. Kelton was also distributed in the United Kingdom, Portugal and Italy. Prices ranged from 99 to 320 French francs. K'Watch, Kelton's response to Swatch launched in June 1984, was priced from 249-270 FF. Kelton brand awareness was very high in France and it had a young, inexpensive, active and fashionable image. Philippe d'Herbomez, Kelton Marketing Manager, commented:

> "When you think about the Swatch strategy you realize that the product was launched on the Kelton concept: "Vous vous changez, changez de Kelton" (Time to change, change your Kelton!) but the consumer more readily changes his Swatch than his Kelton since with every new Swatch collection the previous ones become virtually obsolete. When Swatch was launched Kelton was no longer very fashionable and had become expensive in comparison with Asian watches. The 1987 Kelton collection is a series of new lower-priced products. Our distribution is wearing thin also so we plan to open up new outlets and invest in communication with emphasis on our well-known, successful slogan."

Other fashion watches had mushroomed in the wake of the Swatch success. The M-Watch, an inexpensive (38 SF) traditional quartz watch containing ETA movements, was launched by Mondaine in Zurich at the same time as Swatch and distributed by the Swiss supermarket chain Migros. In May 1984 the French firm Kiplé launched "Kip'Marine" priced from 210-440 FF and distributed through supermarkets, stationers, "tabacs" and variety stores.

In October 1984, Dr. Konstantin Theile, ETA Marketing Manager during the development of Swatch, left ETA to launch the new brand TIQ (Time Inter Corporation A.G.). This new non-plastic, leather-strapped, silent and reparable waterproof quartz watch priced at 70-150 SF targeted an "optimistic, individualistic, fashion-conscious consumer" aged 25-35 but slightly more conservative than the Swatch consumer. Production costs were three times those of Swatch and TIQ granted the usual margin to the trade. Distribution was through upmarket department stores, established jewelers and fashion boutiques. To quote Dr. Theile:

> "Not everybody wants to wear a noisy irreparable plastic watch. It is frustrating to become attached to your watch only to find out that your model cannot be repaired and is no longer available."

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By early 1985 the French firm Beuchat had introduced a series of metal and plastic strap watches with original and fun faces: a sports line illustrating 27 different sports, a "crazy" line including a face with hands turning counter-clockwise and a "corporations" line illustrating different professions . Distribution was the same as Swatch and prices were slightly higher. Beuchat's plans were to expand into promotional watches starting with BMW. Under license from Club Méditerranée, the French firm Marckley CDH had launched waterproof metal and plastic quartz watches distributed worldwide through selective channels. Prices were also slightly higher than Swatch. Marckley did not invest in advertising for the "Club Med" watch but point of sale promotion included an aquarium display containing a submerged watch.

The American firm Le Jour started testing a $49 kaleidoscope color fashion watch called "Sixty" in 1986. Sales, mainly through department stores, were reportedly encouraging. In the spring of 1986 a Swiss entrepreneur launched "The Clip", a clip-on waterproof, shock-resistant, silent and reparable quartz watch designed to be worn "anywhere except on the wrist" and sold through the same distribution channels as Swatch. Launched in Switzerland at 40 SF and 50 SF, The Clip was introduced in France, Spain, West Germany and England in the Summer and would roll out to the United States in the Fall. E. A. Day, Managing Director of Louis Newmark, the Swatch distributor in the U.K., commented:

> "It is too early to discuss the future of The Clip. It does appear to sell well when promoted, but once the promotion ends, sales drop back dramatically."

In the Summer of 1986, the Swiss firm SAMEL S.A. had introduced "Sweet-zerland", a water-resistant quartz watch with a 2-year battery that snapped in and out of interchangeable elastic terrycloth wristbands in different colors, priced at $40. Distribution was through jewelry stores, fashion boutiques, accessory and sports shops, perfumeries and upmarket department stores in France, West Germany, Austria, Benelux, Italy, Spain and Portugal as well as the United States through a Californian subsidiary.

Sekonda, an English firm importing watches from the USSR and Hong Kong, launched a new line of fashion watches in 1985, under the brand names "Spangles", "Phantom" and "Nostalgia". Prices ranged from £15 to £20. A mechanical watch named "Hotline", with style variations on the dial and strap, appeared in West Germany and Switzerland in 1986. It was explicitly

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aimed at pre-teen age groups and retailed mainly in department stores for 30 DM. Other fashion watches in roughly the same price category as Swatch included Avia, Alfex, Orion, Zeon, Video Clip and Hip-Hop. Selected advertisements for "fashion watches" in different countries are pictured in Exhibit 21.

The Meeting

Chris Keigel checked the fashionable collection of Swatches on his wrist. It was time to make major decisions for the future of Swatch and the meeting with Thomke, Marquardt, Imgrüth and Sprecher, was approaching fast. He perused the sales figures in Exhibit 22. Keigel knew that Swatch guards and shields, the Parafernalia line and the Coca Cola watches yielded profit margins exceeding that of Swatch watches whereas those of the other items in the US extended product line did not. Apparel profit margins had dropped and sales were lagging behind forecasts. Swatch management knew that the transport and other costs involved in importing this line to Europe might put prices out of line, especially since the clothing was designed specifically for the American market. He also knew that Max Imgrüth was pushing for six collection changes per year but remembered hearing Franz Sprecher advocate a more conservative approach:

> "We can't just announce 'Here comes our collection' to the trade. We are an accessory, we are not making fashion. What is most important is what the consumer will think. Are we really enough of a fashion product in the eyes of the consumer to make a planned line extension into fashion wear? If Calvin Klein, Ralph Lauren or Benetton make a watch, that works because they are established fashion firms, but I have never seen it work the other way around. There is a lot of competition in the department stores, whole floors of T-shirts, so where is our expertise?"

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EXHIBIT 1

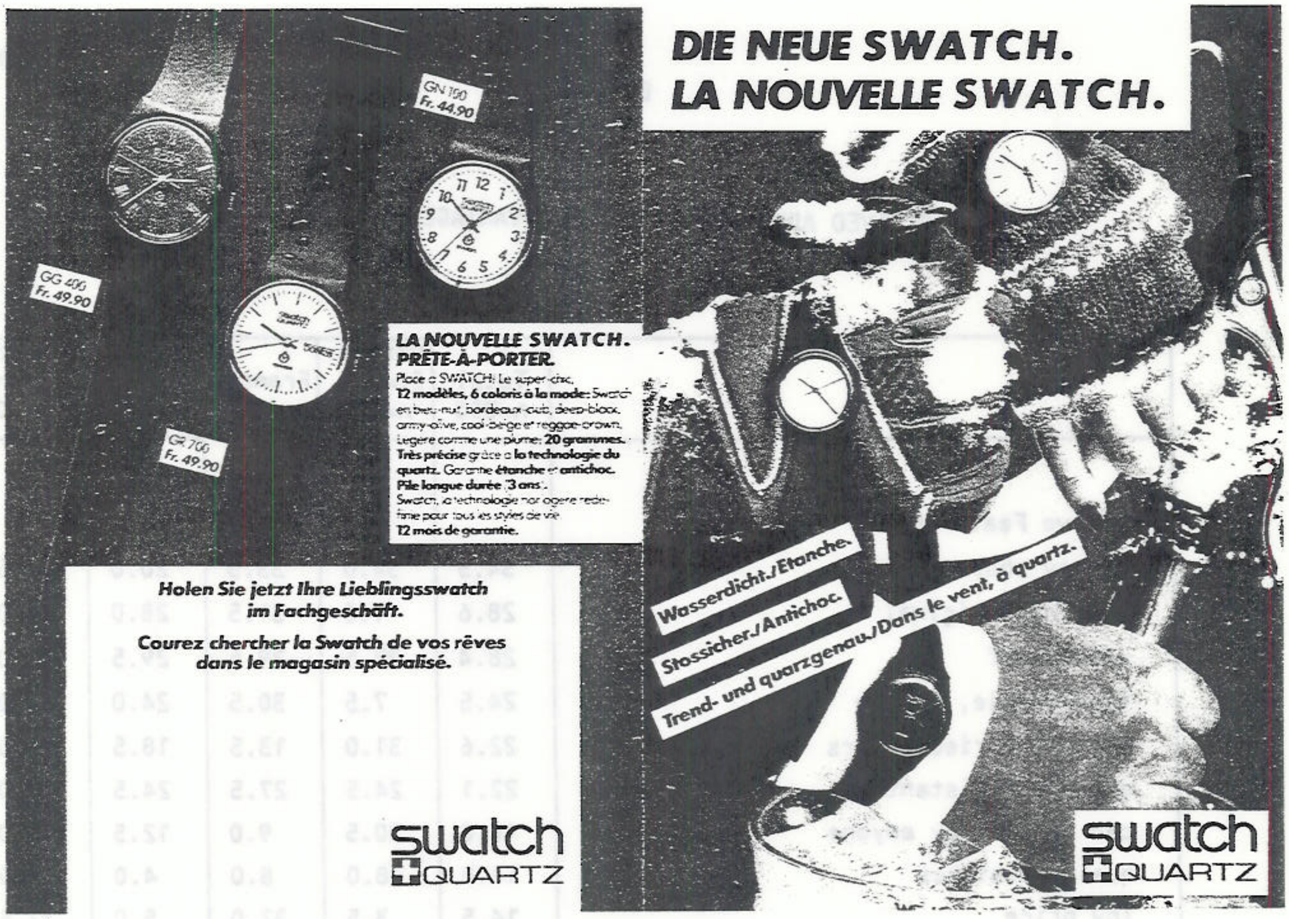
A SEMIOTIC COMPARISON OF DIGITAL AND ANALOG WATCHES

DIGITAL	ANALOG
1. TIME IS REPRESENTED BY A SIGN	1. TIME IS REPRESENTED BY A SYMBOL
2. THE FOCUS IS ON	2. THE FOCUS IS ON
- THE INSTANT	- LENGTH OF TIME
- NUMERICAL CODE	- A PICTORIAL CODE
- DISCONTINUITY	- CONTINUITY
- LINEARITY AND PERIODICITY	- CIRCULARITY AND CYCLICAL CHARACTER
3. SIGNIFICATION	3. SIGNIFICATION
- THE TIME DISPLAY IS PRECISE	- TIME DISPLAY IS IMPRECISE
- TIME IS IMPOSED	- TIME CAN BE NEGOTIATED
- MONOSEMY : ONLY ONE MEANING	- POLYSEMY : SEVERAL MEANINGS

Source: Adapted from Michel-Adrien Voirol "Un Problème d'Evolution du Produit Horloger", in "Les Apports de la Sémiotique au Marketing et à la Publicité", IREP Seminar, 1976.

EXHIBIT 2

SWATCH INTERNATIONAL LAUNCH COLLECTION


GN 190
Fr. 44.90
GG 400
Fr. 49.90
GR 700
Fr. 49.90
Wasserdicht./Etanche.
Stossicher./Antichoc.
Trend- und quarzgenau./Dans le vent, à quartz.
swatch QUARTZ
swatch QUARTZ

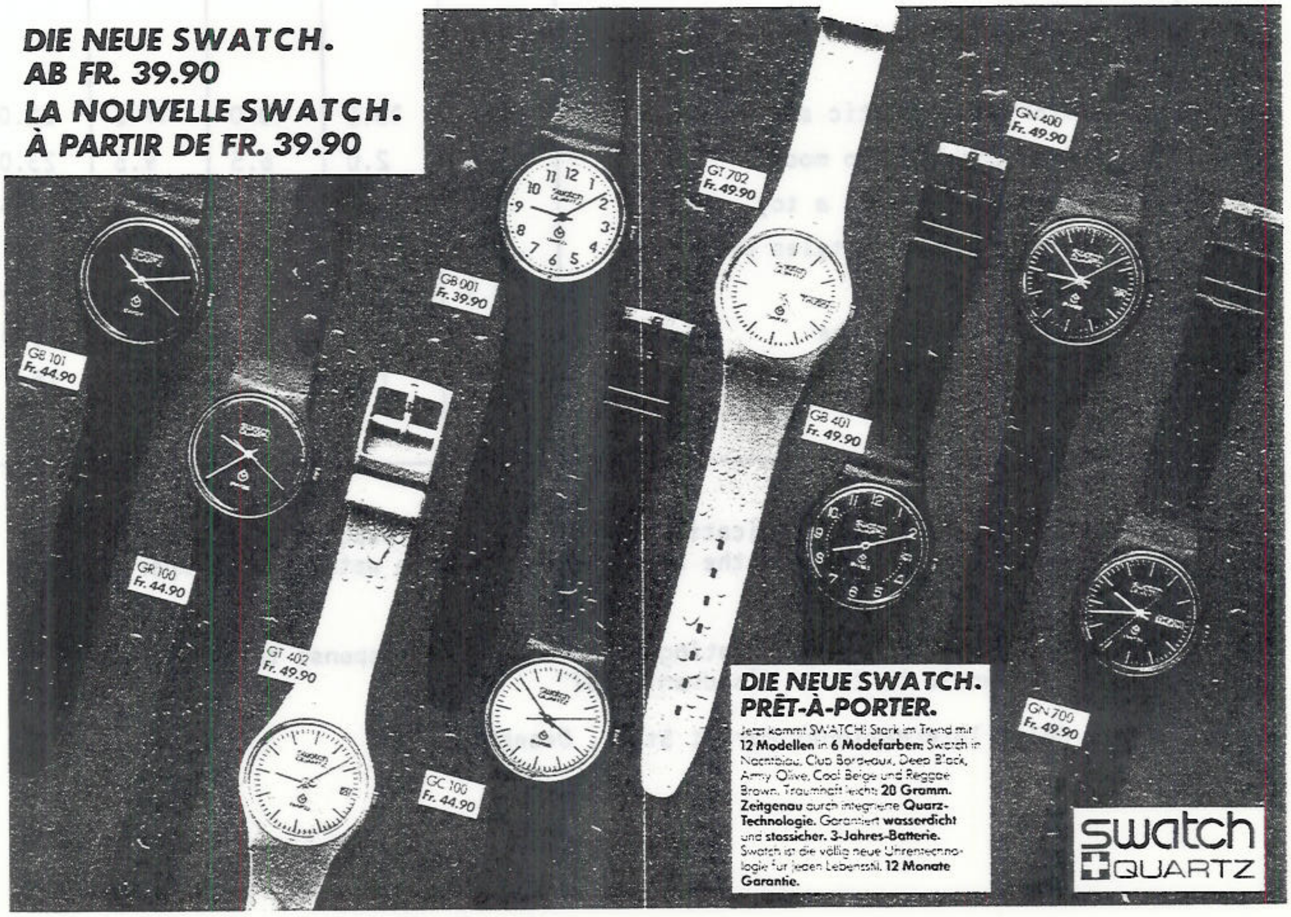
DIE NEUE SWATCH.
LA NOUVELLE SWATCH.

LA NOUVELLE SWATCH.
PRÊTE-À-PORTER.

Place à SWATCH: Le super-chic.
12 modèles, 6 coloris à la mode: Swatch en bleu-nuit, bordeaux-club, deep-black, army-olive, cool-beige et reggae-brown. Légère comme une plume: **20 grammes.** **Très précise** grâce à **la technologie du quartz.** Garantie **étanche** et **antichoc.** **Pile longue durée** (**3 ans**).
Swatch, la technologie horlogère redéfinie pour tous les styles de vie.
12 mois de garantie.

Holen Sie jetzt Ihre Lieblingsswatch im Fachgeschäft.

Courez chercher la Swatch de vos rêves dans le magasin spécialisé.


GB 101
Fr. 44.90
GR 100
Fr. 44.90
GT 402
Fr. 49.90
GB 001
Fr. 39.90
GC 100
Fr. 44.90
GT 702
Fr. 49.90
GB 401
Fr. 49.90
GN 400
Fr. 49.90
GN 700
Fr. 49.90
swatch QUARTZ

DIE NEUE SWATCH.
AB FR. 39.90
LA NOUVELLE SWATCH.
À PARTIR DE FR. 39.90

DIE NEUE SWATCH.
PRÊT-À-PORTER.

Jetzt kommt SWATCH! Stark im Trend mit **12 Modellen** in **6 Modefarben:** Swatch in Nachtblau, Club Bordeaux, Deep Black, Army Olive, Cool Beige und Reggae Brown. Traumhaft leicht: **20 Gramm.** **Zeitgenau** durch integrierte **Quarz-Technologie.** Garantiert **wasserdicht** und **stossicher. 3-Jahres-Batterie.** Swatch ist die völlig neue Uhrentechnologie für jeden Lebensstil. **12 Monate Garantie.**

EXHIBIT 3

PERCEIVED ADVANTAGES AND DISADVANTAGES OF SWATCH IN 1984

	Total n=800	United States n=200	France n=200	Great Britain n=200	West Germany n=200
Positive Features:					
pretty shape	34.5*	34.0	33.5	20.0	50.5
amusing, original	28.6	9.0	31.5	28.0	46.0
waterproof	28.4	37.5	29.5	29.5	17.0
fashionable, modern	24.5	7.5	30.5	24.0	36.0
pretty, varied colors	22.6	31.0	13.5	18.5	27.5
strong, resistant	22.1	24.5	27.5	24.5	12.0
can be worn by anyone	16.0	30.5	9.0	12.5	12.0
quality watches	14.8	28.0	8.0	4.0	19.0
low price	14.5	3.5	32.0	5.0	17.5
can be worn anywhere	12.6	13.5	13.5	11.0	12.5
Negative Features:					
uncomfortable plastic strap	16.0**	13.5	13.0	17.5	20.0
too fashionable, too modern	10.3	2.0	6.5	9.5	23.0
looks like a gadget, a toy	9.9	3.5	10.0	8.5	17.5
does not match all styles of dress	8.4	1.0	4.0	14.0	14.5
fragile	8.1	0.5	12.0	3.0	17.0
too sophisticated face	7.4	6.0	3.0	8.5	12.0
too much plastic	6.6	1.0	7.5	-	18.0
too noisy	3.6	-	12.5	1.0	1.0

* Percent of respondents indicating this feature in response to the question: "What in your opinion, are the advantages of Swatch watches in comparison with other watches?"

** Percent of respondents indicating this feature in response to the question: "And what would be their disadvantages?"

Source: Delta International Market Study, December, 1984

EXHIBIT 4

ACTUAL AND PERCEIVED 1986 RETAIL PRICES OF SWATCH

UNITED STATES

Actual Price = $ 30

Perceived Price ($)	Total n=290	Buyers n=99	Potential Buyers n=140	Non-Buyers n=51
< 20	8 *	3	9	16
21-30	57	62	56	49
31-40	26	25	26	25
41-50	6	7	6	2
51-60	2	3	2	2
> 60	1	-	1	2

UNITED KINGDOM

Actual Price = £ 24

Perceived Price (£)	Total n=202	Buyers n=68	Potential Buyers n=83	Non-Buyers n=51
< 10	4	-	4	12
11-15	10	3	14	14
16-20	39	44	36	35
21-25	22	38	16	12
26-30	8	4	10	12
31-35	1	1	1	2
36-40	2	-	4	2
> 40	1	1	-	-

FRANCE

Actual Price = FF 250

Perceived Price (FF)	Total n=200	Buyers n=66	Potential Buyers n=99	Non-Buyers n=35
< 100	10	2	11	20
100-150	9	2	12	14
151-200	17	8	23	17
201-250	41	74	32	3
251-300	7	9	5	9
301-400	4	3	4	3
> 400	2	3	1	3

WEST GERMANY

Actual Price = 65 DM

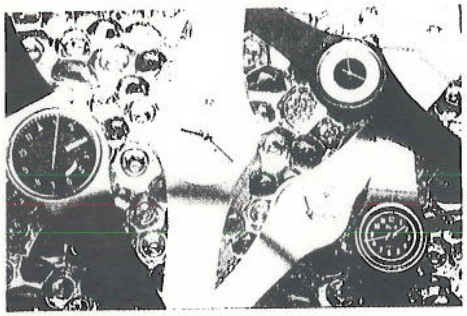
Perceived Price (DM)	Total n= 200	Buyers n=67	Potential Buyers n=74	Non-Buyers n=59
< 20	3	3	-	7
21-40	11	6	12	14
41-60	38	27	42	44
61-80	39	58	34	22
81-100	7	4	8	8
101-200	3	2	3	3
> 200	1	-	1	2

* Percent of total responses to the question: "All the [Swatch] watches have the same price - could you estimate that price?"

Source: Qualitest A.G. Market study, Zurich, August 1986, and company records

EXHIBIT 5

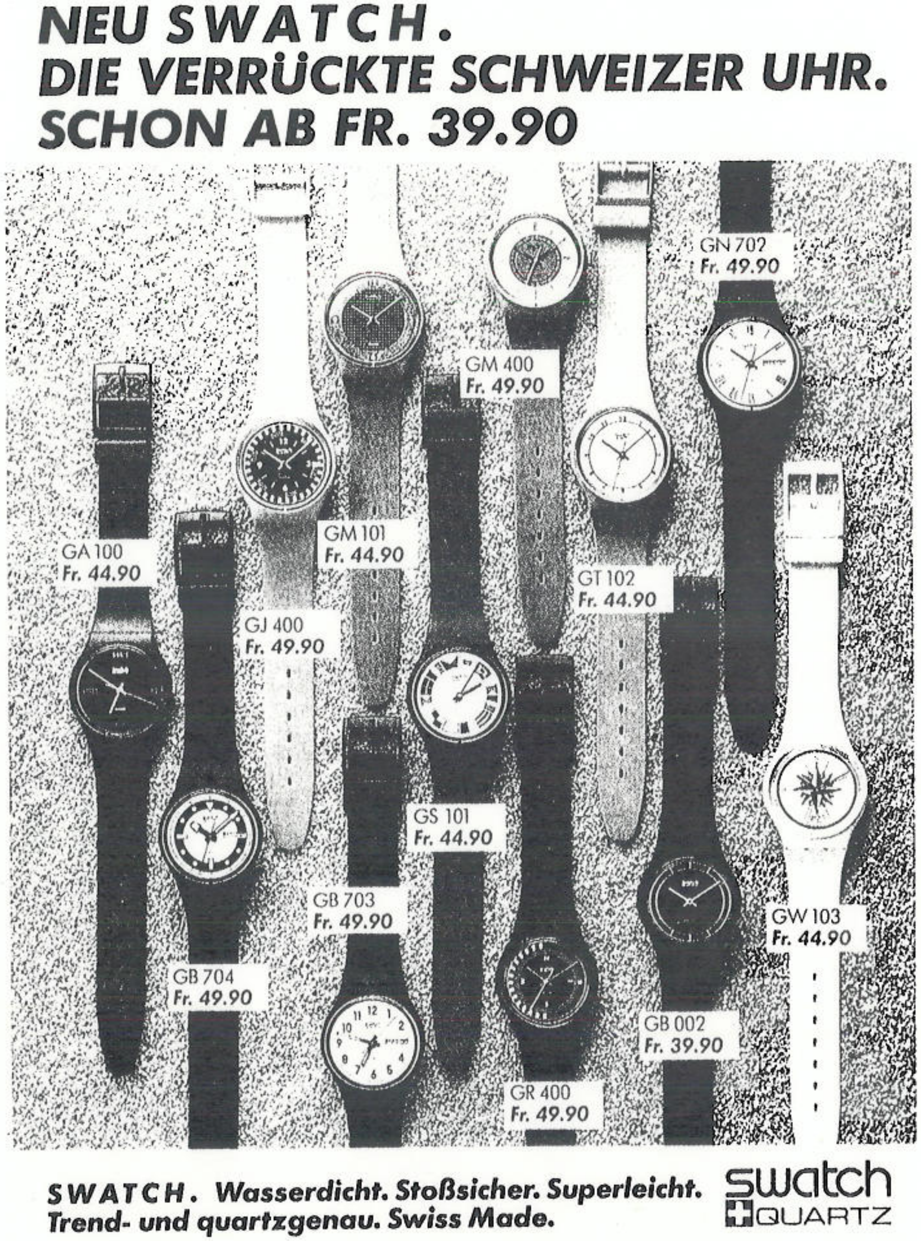
SELECTED WATCHES FROM THE 1984-1986 COLLECTIONS



CRESTA RUN
Spring/Summer 1985

SWATCH
STREET SMART
1) »Sheherazade« LM 105
2) »McSwatch« LR 105
3) »Velvet Underground« LB 108
4) »McGregor« GJ 100

STREET SMART
Fall/Winter 1985/86



NEU SWATCH.
DIE VERRÜCKTE SCHWEIZER UHR.
SCHON AB FR. 39.90

GA 100
Fr. 44.90
GJ 400
Fr. 49.90
GM 101
Fr. 44.90
GB 704
Fr. 49.90
GM 400
Fr. 49.90
GB 703
Fr. 49.90
GS 101
Fr. 44.90
GR 400
Fr. 49.90
GT 102
Fr. 44.90
GN 702
Fr. 49.90
GB 002
Fr. 39.90
GW 103
Fr. 44.90

SWATCH. Wasserdicht. Stoßsicher. Superleicht.
Trend- und quartzgenau. Swiss Made.

swatch QUARTZ

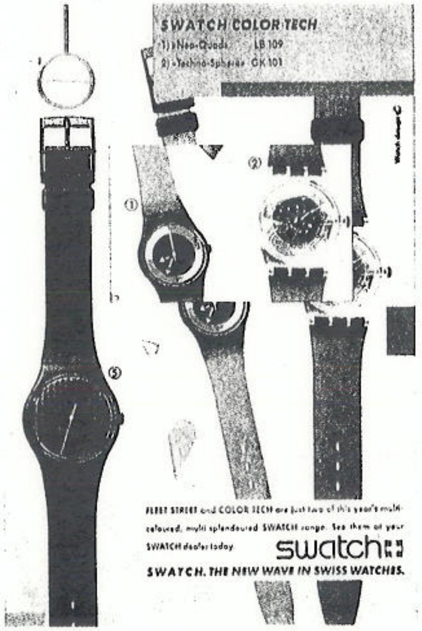
SPRING/SUMMER 1984

THE NEW SWATCH. GRANITA DI FRUTTA.
THE ONLY WATCH THAT MAKES SCENTS.

swatch

SWATCH. THE NEW WAVE IN SWISS WATCHES.

GRANITA DI FRUTTA
Spring/Summer 1985



SWATCH COLOR TECH
1) »Neo-Quad« LB 109
2) »Techno-Sphere« GK 101

FLEET STREET and COLOR TECH are just two of this year's multi-coloured, multi splendoured SWATCH range. See them at your SWATCH dealer today.

swatch

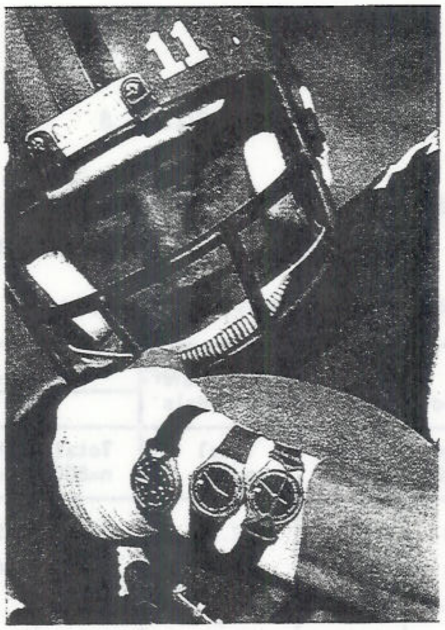
SWATCH. THE NEW WAVE IN SWISS WATCHES.

COLOR TECH
Fall/Winter 1985/86

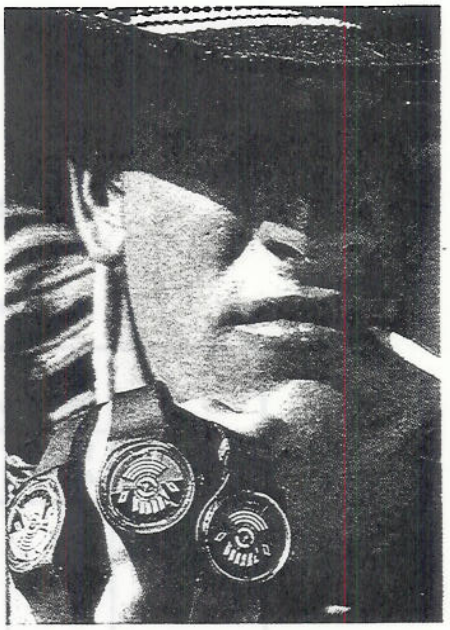
EXHIBIT 5 (cont'd)

1986 Collections

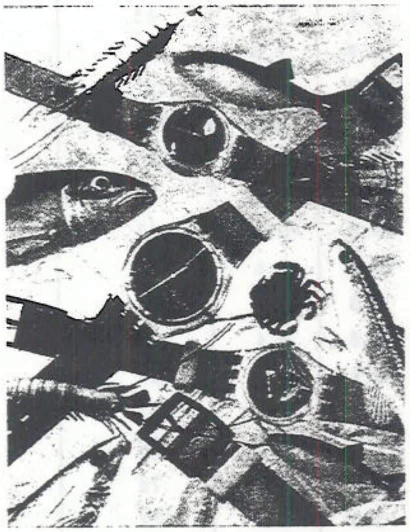
Coats of Arms



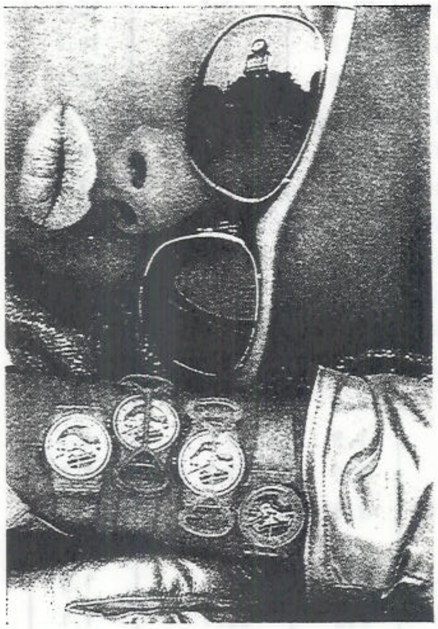
Devil's Run



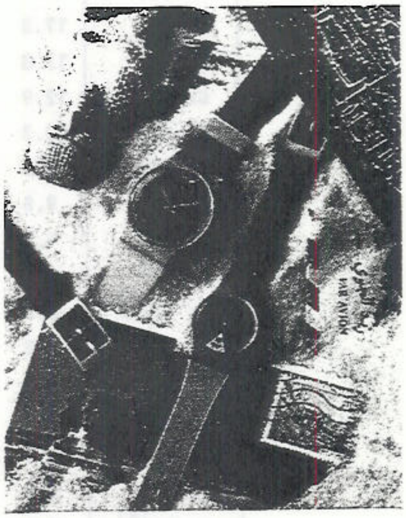
Kiva



Aqua Love



Jellyfish



Nefertiti

Morgans

Classics

CALYPSO
BEACH

Calypso Beach

EXHIBIT 6

PREFERENCES, PURCHASE INTENTIONS AND SALES DATA FOR 1985 SPRING/SUMMER SWATCH COLLECTION

(France, West Germany, Great Britain, United States)

	Most Preferred Models①			Least Preferred Models②	Purchase Intentions③				Ex-factory Sales World-wide (000 units)
					For Self			Gift	
SWATCH CODE	Total n=800	Men n=400	Women n=400	Total n=800	Total n=800	Men n=400	Women n=400	Total n=800	
GB 101	41.1	63.3	19.0	2.0	33.6	57.0	10.3	27.0	147
GA 102	36.1	58.8	13.5	3.9	28.4	48.5	8.3	26.0	149
LB 106	20.6	6.5	34.6	1.5	16.6	2.8	30.6	18.3	140
LM 104	20.4	3.3	37.6	2.3	18.1	1.0	35.3	21.0	70
GM 401	19.0	24.8	13.3	3.1	15.9	21.3	10.5	15.0	67
LW 104	18.3	3.8	32.8	3.5	15.1	1.3	29.1	16.6	246
LA 100	17.4	6.5	28.3	1.4	15.1	3.3	27.1	17.3	207
GN 401	17.3	31.8	2.8	4.3	15.1	28.3	2.0	11.8	63
GB 705	13.3	22.8	3.8	8.5	10.5	19.3	1.8	7.8	106
GW 104	12.9	11.8	14.0	7.9	8.0	5.8	10.3	9.9	221
GB 706	10.3	16.3	4.3	10.0	7.5	12.5	2.5	8.0	121
GK 100	9.9	11.5	8.3	48.9	6.3	7.3	5.3	8.0	286
GT 103	9.8	9.3	10.3	5.1	5.6	5.0	6.3	6.8	53
LT 101	9.5	1.8	17.3	3.1	7.1	0.3	14.0	10.3	53
LB 107	6.9	1.8	11.8	6.8	5.5	0.5	10.3	5.6	88
LW 107④	6.1	1.0	11.3	27.5	4.5	0.8	8.3	7.1	322
GJ 700	5.8	7.3	4.3	37.4	3.6	4.5	2.8	4.4	104
LN 103	4.1	0.8	7.3	2.6	3.3	-	6.5	5.6	64
LW 105④	3.9	0.8	7.0	17.3	3.0	0.3	5.8	4.6	213
GM 701	3.9	5.0	2.8	22.3	2.8	4.0	1.5	2.3	108
GB 403	3.5	4.5	2.5	13.9	2.5	3.5	1.5	2.9	78
LW 106④	2.4	0.8	4.0	27.1	1.5	-	3.0	3.1	152
LS 102	1.8	1.0	2.5	28.9	1.1	0.3	2.0	2.1	107
LB 105	1.5	0.8	2.3	5.0	1.3	0.8	1.8	1.6	118
LB 104	1.1	0.5	1.8	3.5	0.6	0.3	1.0	2.3	125

1 Percent of total responses to the question, "Here are a number of new Swatch watches. They come in two sizes, standard and small. Which are the three you like best?"

2 Percent of total responses to the question, "Which are the three watches you like least?" Responses were virtually the same regardless of sex.

3 Percent of total responses to the question, "Would you consider buying such a watch for yourself or as a gift?"

4 "Granita di Frutta": 57.9% of those interested in these models as gifts claimed the recipient would be a girl under 15 years of age.

Source: Delta International Market Study, December 1984 and company records

N.B. THE COLLECTION IS PRESENTED ON THE NEXT PAGE

EXHIBIT 6 (cont'd)

1985 SPRING / SUMMER COLLECTION

GB 101 Carlton

GB 403 Coral Reef

GT 103 Plaza

GB 705 Plaza

GB 706 Plaza

GJ 700 Coral Reef

GN 401 Plaza

GM 701 Coral Reef

GA 102 Carlton

GM 401 Plaza

GW 104 Coral Reef

GK 100 Jelly-fish

LW 107

LW 105

Granita di Frutta

LW 106

LA 100 Carlton

LB 104 Coral Reef

LB 106 Carlton

LB 105 Plaza

LB 107 Plaza

LS 102 Coral Reef

LN 103 Carlton

LT 101 Plaza

LM 104 Plaza

LW 104 Coral Reef

EXHIBIT 7

SWATCH DISTRIBUTION CHANNELS

CHANNEL	Switzer-land		United Kingdom		France		West Germany		United States	
	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986
Dept. stores	10*	10	6	9	3	11	19	22	82	71
Jewellers	85	78	87	78	95	79	73	59	3	2
Sports shops	-	-	0.1	0.1	-	-	6	16	1	2
Fashion shops	5	12	6	12	-	-	2	4	6	12
Others**	-	0.2	0.4	0.5	2	10	-	-	8	14
Total Number of stores (incl. branches)	590	511	1708	1273	2634	2266	1030	511	6437	4634

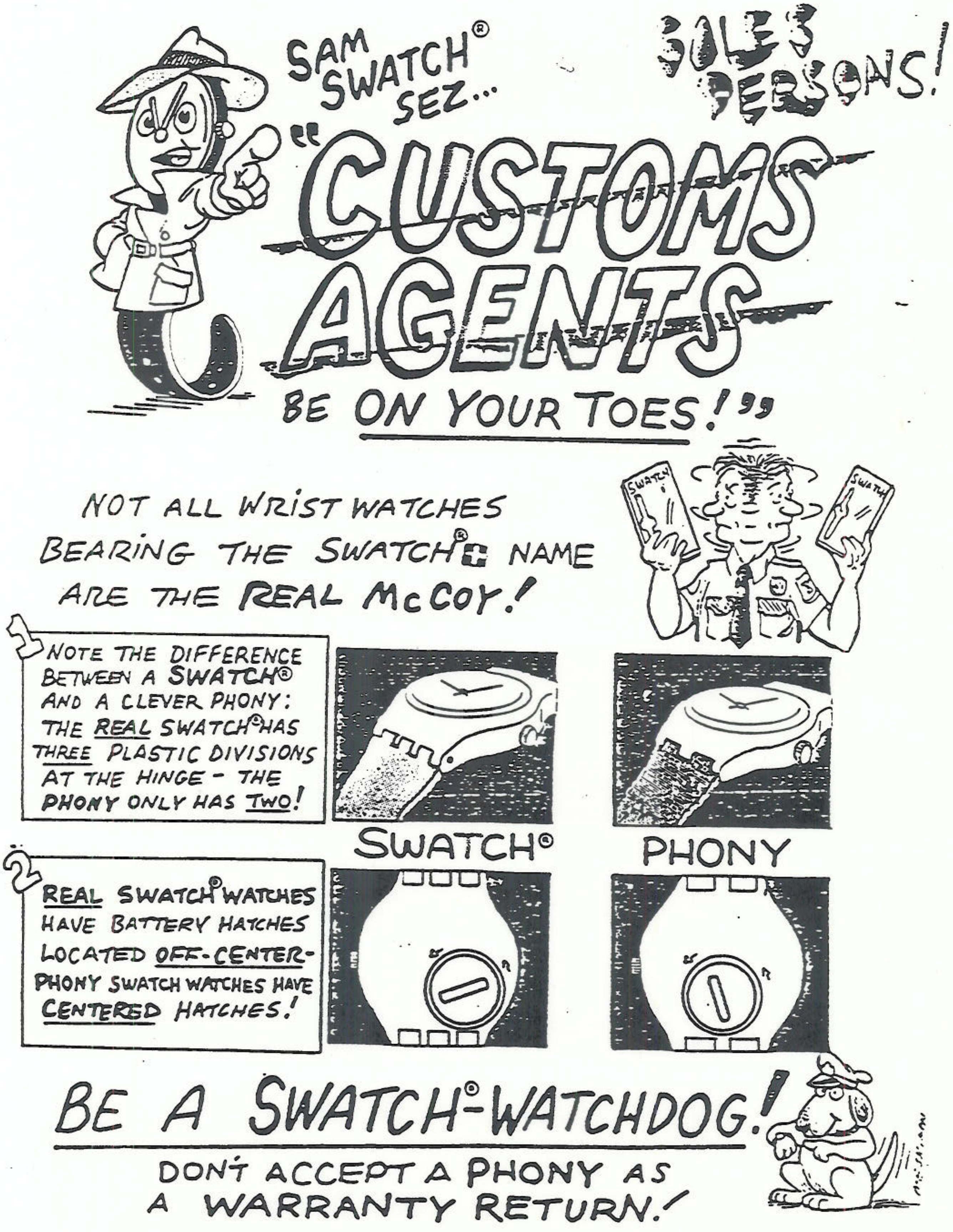
Source: Company records

* percent of total number of outlets

** gift and card shops, drug stores, college bookstores, military exchanges, catalogues, etc.

EXHIBIT 8

EXAMPLE OF SWATCH COUNTERFEIT ALERT PROGRAM



SAM SWATCH® SEZ...

SALES PERSONS!

"~~CUSTOMS AGENTS~~ BE ON YOUR TOES!"

NOT ALL WRIST WATCHES BEARING THE SWATCH® NAME ARE THE REAL McCOY!

1 NOTE THE DIFFERENCE BETWEEN A SWATCH® AND A CLEVER PHONY: THE REAL SWATCH® HAS THREE PLASTIC DIVISIONS AT THE HINGE - THE PHONY ONLY HAS TWO!

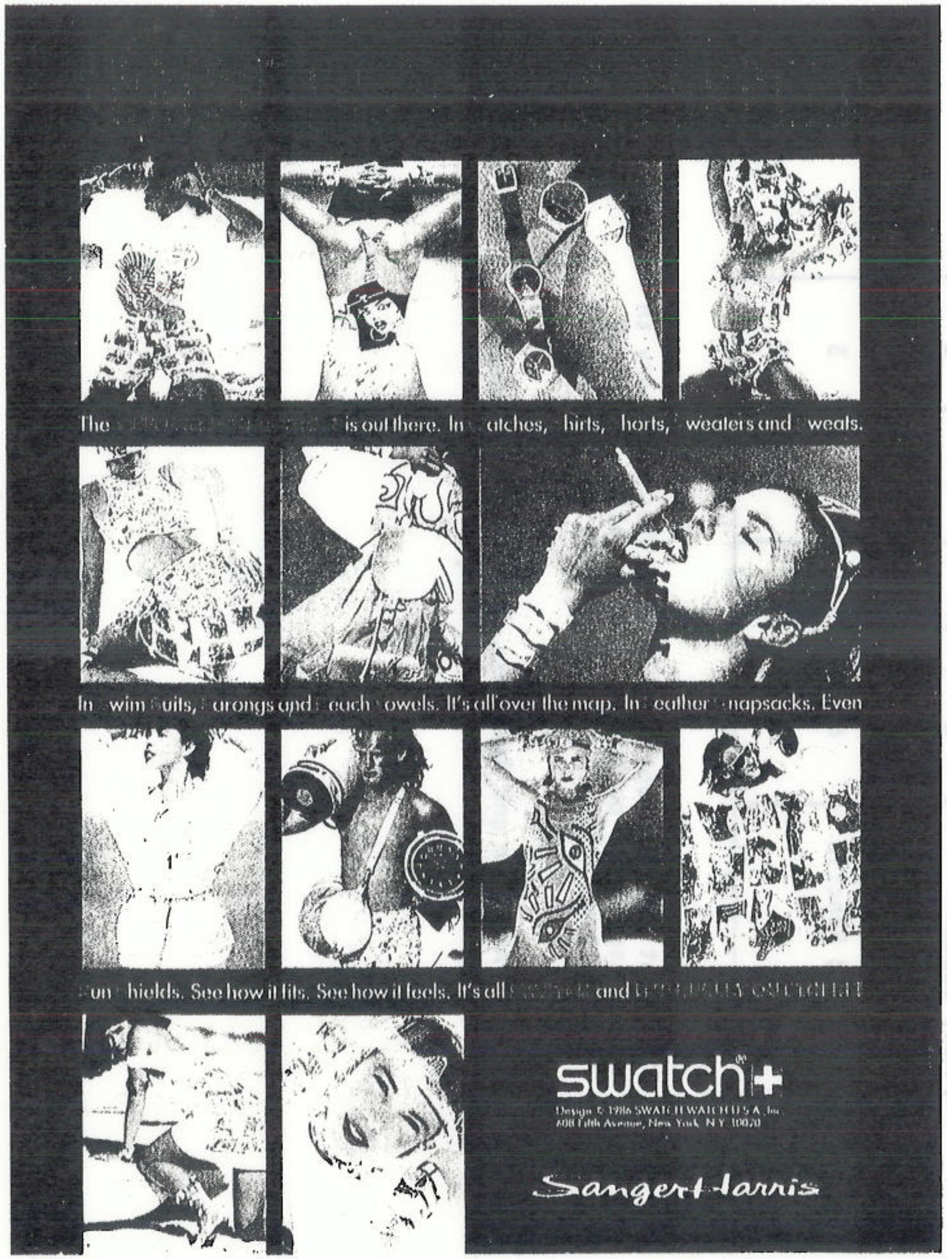
2 REAL SWATCH® WATCHES HAVE BATTERY HATCHES LOCATED OFF-CENTER - PHONY SWATCH WATCHES HAVE CENTERED HATCHES!

BE A SWATCH®-WATCHDOG!

DON'T ACCEPT A PHONY AS A WARRANTY RETURN!

EXHIBIT 9

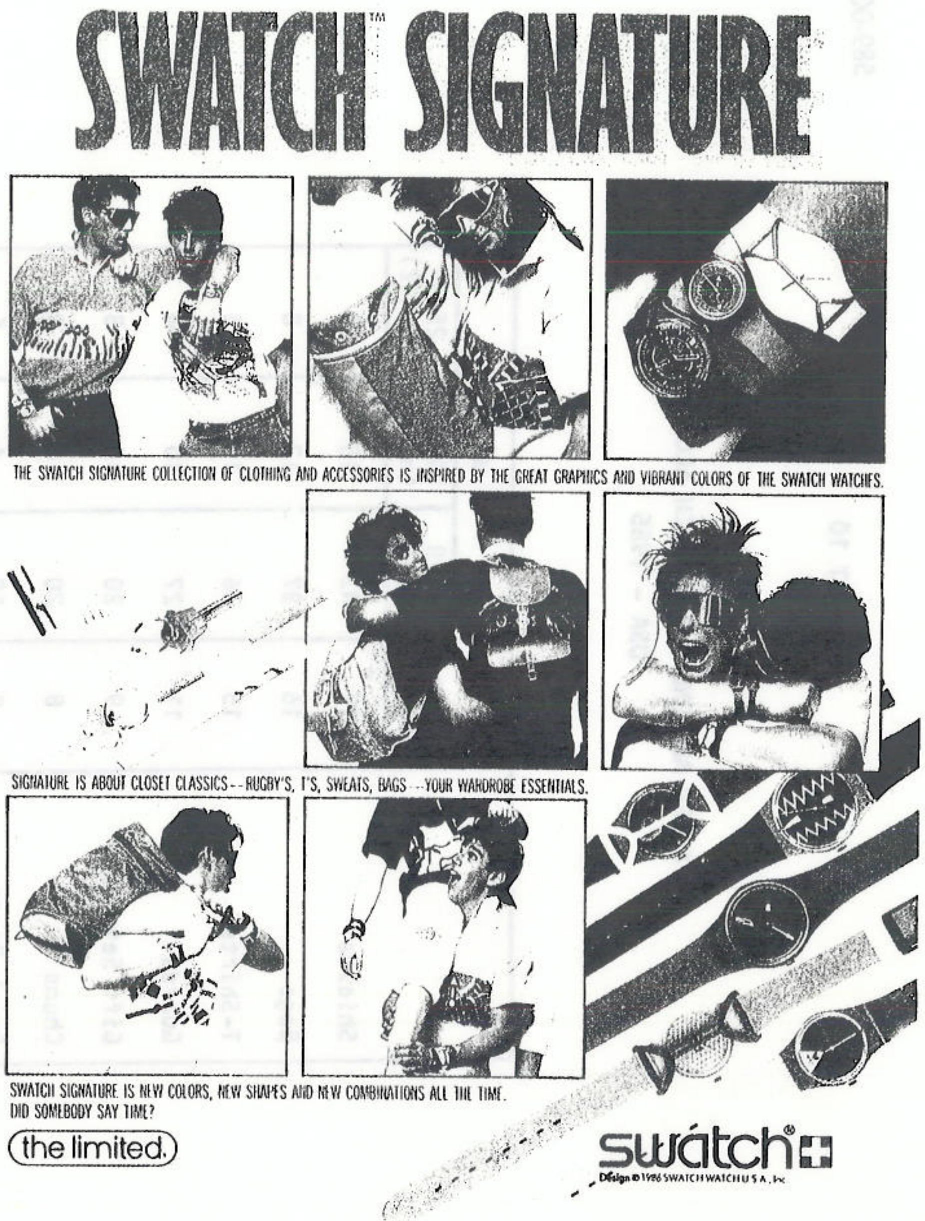
SWATCH ACCESSORIES AND APPAREL
(USA)



The [illegible] is out there. In watches, shirts, shorts, sweaters and sweats. In swim suits, sarongs and beach towels. It's all over the map. In leather knapsacks. Even sun shields. See how it fits. See how it feels. It's all [illegible] and [illegible]

swatch
Design © 1986 SWATCH WATCH U.S.A., Inc.
608 Fifth Avenue, New York, N.Y. 10020
Sanger-Harris

FUNWEAR & FUNGEAR



SWATCH™ SIGNATURE

THE SWATCH SIGNATURE COLLECTION OF CLOTHING AND ACCESSORIES IS INSPIRED BY THE GREAT GRAPHICS AND VIBRANT COLORS OF THE SWATCH WATCHES.

SIGNATURE IS ABOUT CLOSET CLASSICS--RUGBY'S, T'S, SWEATS, BAGS--YOUR WARDROBE ESSENTIALS.

SWATCH SIGNATURE IS NEW COLORS, NEW SHAPES AND NEW COMBINATIONS ALL THE TIME. DID SOMEBODY SAY TIME?

the limited.
swatch
Design © 1986 SWATCH WATCH U.S.A., Inc.

SIGNATURE LINE

EXHIBIT 10

AIDED AWARENESS OF SWATCH ACCESSORIES
USA – 1985

	Total	AGE		
	Sample (n=895)	12-18 (n=219)	19-24 (n=234)	25-34 (n=442)
Shields	17*	43	13	8
Bags	16	37	12	8
T-Shirts	15	36	13	6
Guards	11	27	10	4
Gift Sets	9	20	10	3
Chums	8	20	6	3
Beach Boxes	8	18	4	5
Maxi Swatch	8	17	7	3
Pocket Knives	6	15	5	2
Pens and Pencils	6	13	3	3
Razors	3	5	3	1

* Percent of respondents indicating this accessory in response to the question: "Please tell me which of the following Swatch accessories you are aware of."

Source: "Attitude and Awareness of Swatch in Various Markets" Study, McCann-Erickson, July 1985

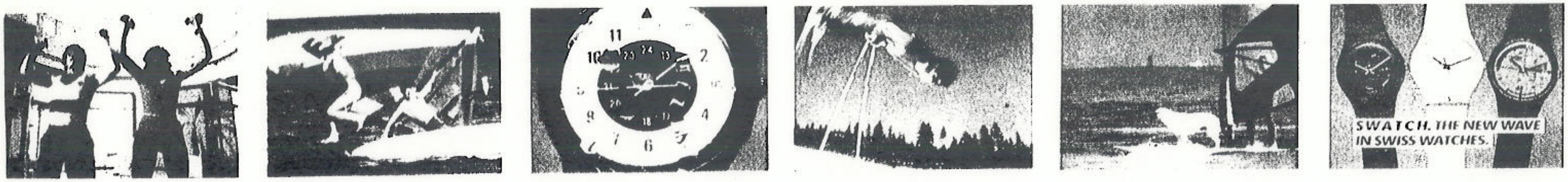
EXHIBIT 11

SWATCH INTERNATIONAL TV COMMERCIALS

"HERO" - 1983 LAUNCH CAMPAIGN

TEXT: "Watch! Swatch! La Nouvelle Swatch! Swatch, Swiss quartz, water-resistant, shock-resistant, imported from Switzerland. It's come a long way since the cuckoo clock. Swatch, the new wave in Swiss watches."

"NEW CUT II" - 1984



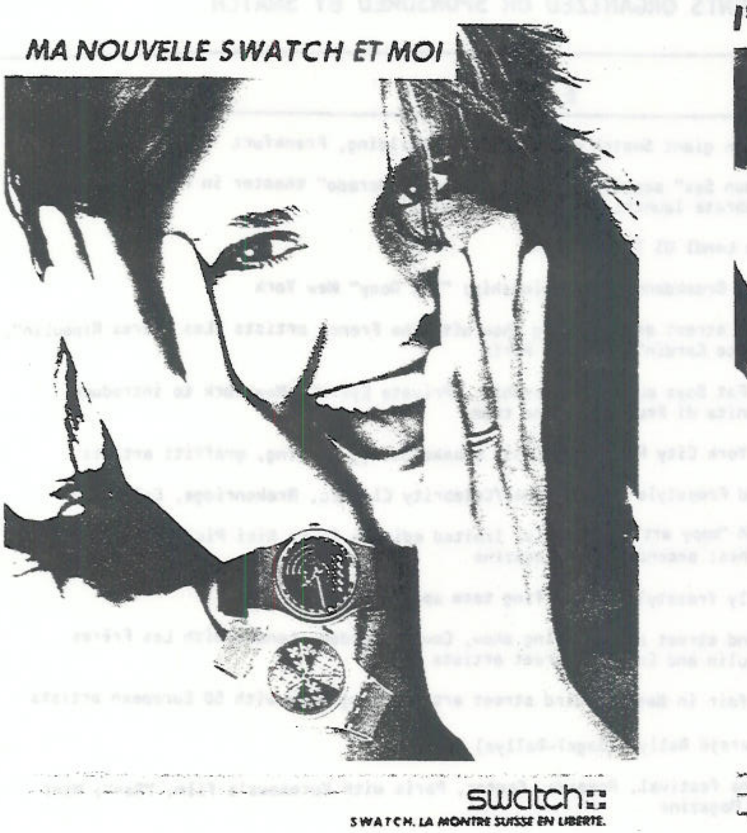
TEXT: "Watch! Swatch! La Nouvelle Swatch! Portable Swiss quartz watches that are more than water-resistant, shock-resistant: Swiss watches that are more than precise. These days it's fashion that makes us tick. Swatch, the new wave in Swiss watches!"

"STREETLIFE" - 1986

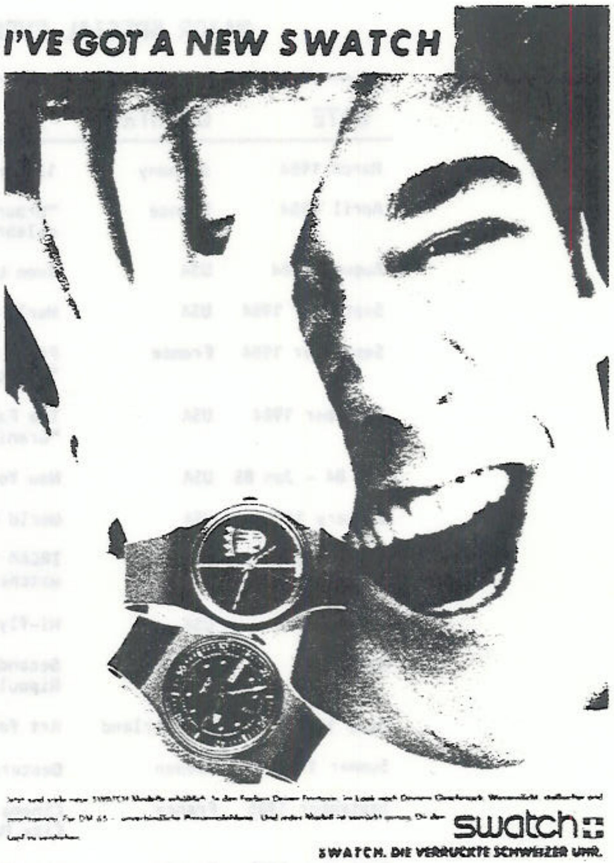
TEXT: "Swatch! (Swatch...) Always different, always new! (Swatch!) Fashionable (Swatch!), water-resistant, shock-resistant, Swiss-made (Swatch!). Swatch, the new wave in Swiss watches!"

EXHIBIT 12

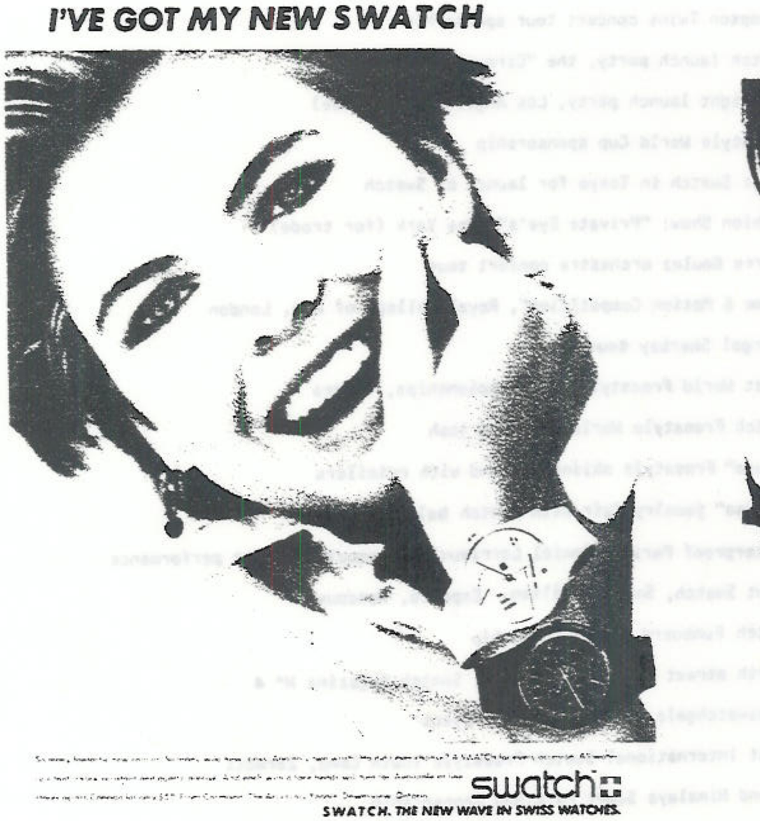
INTERNATIONAL ADAPTATION OF SWATCH PRINT ADS


MA NOUVELLE SWATCH ET MOI
SWATCH. LA MONTRE SUISSE EN LIBERTÉ.

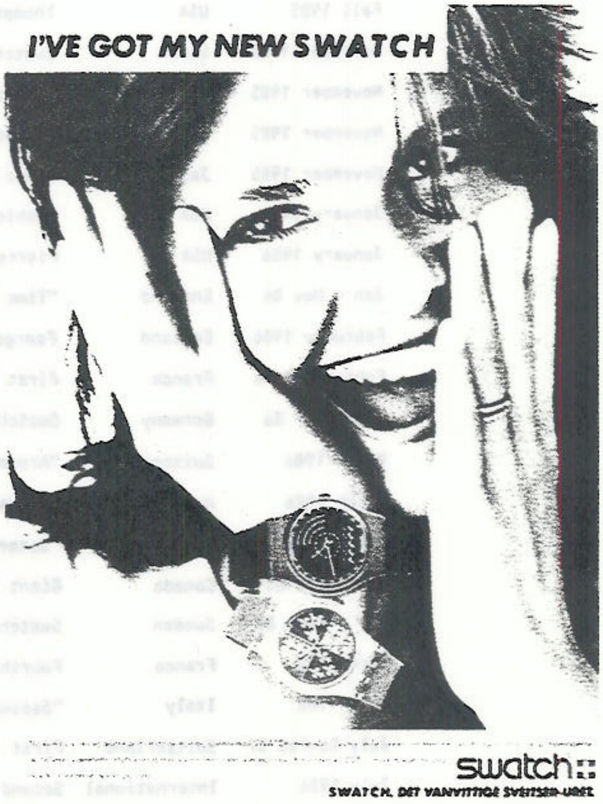
FRANCE


I'VE GOT A NEW SWATCH
SWATCH. DIE VERRÜCKTE SCHWEIZER UHR.

WEST GERMANY


I'VE GOT MY NEW SWATCH
SWATCH. THE NEW WAVE IN SWISS WATCHES.

CANADA


I'VE GOT MY NEW SWATCH
SWATCH. DET VANVITTIGE SVEITSER-URET.

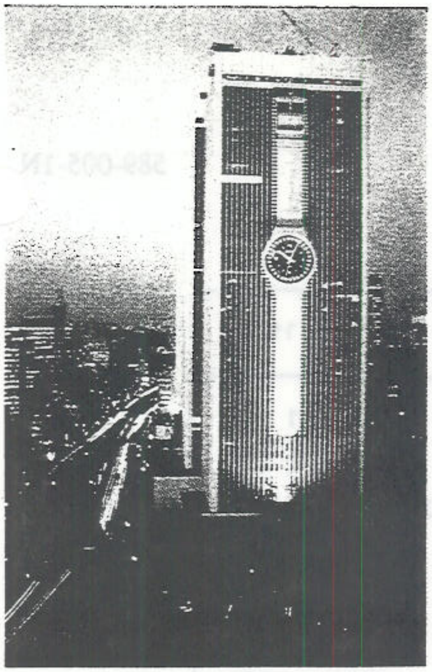
NORWAY

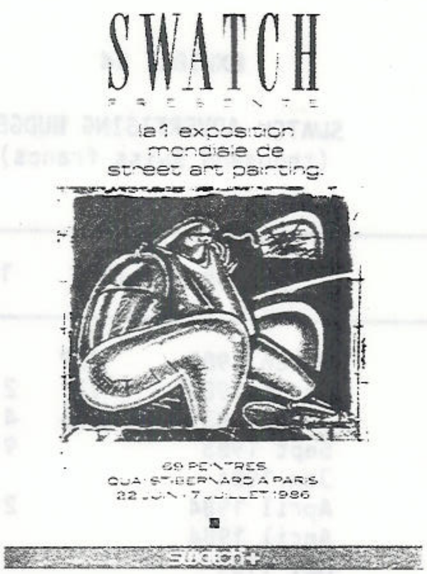
EXHIBIT 13

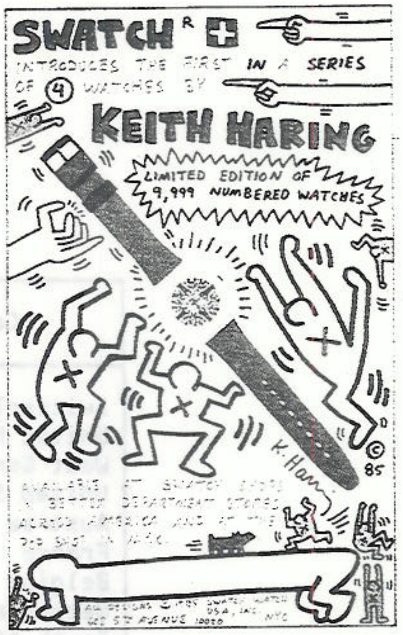
MAJOR SPECIAL EVENTS ORGANIZED OR SPONSORED BY SWATCH

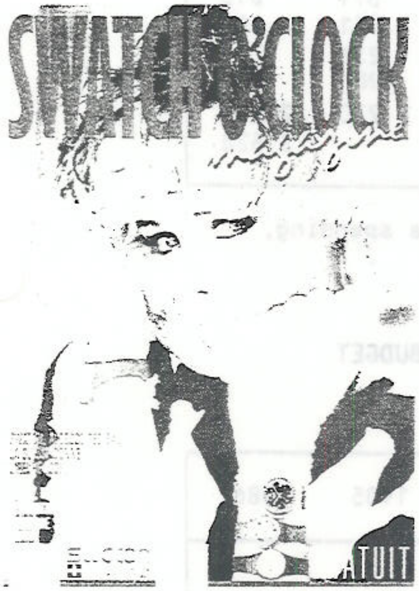
DATE	COUNTRY	EVENT
March 1984	Germany	13-ton giant Swatch on Commerzbank building, Frankfurt
April 1984	France	"Urban Sax" saxofonist group at the "Eldorado" theater in Paris to celebrate launch; first Swatch Magazine
August 1984	USA	Ivan Lendl US Tennis Open
September 1984	USA	World Breakdancing Championship: "The Roxy" New York
September 1984	France	First street art painting show with the French artists "Les Frères Ripoulin", "Espace Cardin" theater, Paris
November 1984	USA	The Fat Boys music sponsorship, "Private Eye's", New York to introduce "Granita di Frutta" to the trade
Oct 84 - Jan 85	USA	New York City Fresh Festival: breakdancing, rapping, graffiti artists
January 1985	USA	World Freestyle Invitational/Celebrity Classic, Brekenridge, Colorado
March 1985	France	IRCAM "copy art" show,Paris; limited edition (119) Kiki Picasso design watches; second Swatch Magazine
Spring 1985	USA	Hi-fly freestyle windsurfing team sponsorship
May 1985	England	Second street art painting show, Covent Garden, London with Les Frères Ripoulin and English street artists
June 1985	Switzerland	Art fair in Basel; third street art painting show with 50 European artists
Summer 1985	Sweden	Oestersjö Rallyt (Segel-Rallye)
September 1985	France	Cinema festival, Pompidou Center, Paris with Kurosawa's film, "Ran"; Mini City Magazine
September 1985	France	"Le Défilé": Jean-Paul Gaultier & Régine Chopinot fashion/dance show, "Pavillon Baltard", Paris
September 1985	England	Andrew Logan's Alternative Miss World, London
October 1985	Belgium	"Mode et Anti-Mode" fashion show, Brussels
Fall 1985	USA	Thompson Twins concert tour sponsorhip
November 1985	Spain	Swatch launch party, the "Cirque", Barcelona
November 1985	USA	Limelight launch party, Los Angeles (for trade)
November 1985	International	Freestyle World Cup sponsorship
November 1985	Japan	Giant Swatch in Tokyo for launch of Swatch
January 1986	USA	Fashion Show: "Private Eye's", New York (for trade)
January 1986	USA	Pierre Boulez orchestra concert tour
Jan - Nov 86	England	"Time & Motion Competition", Royal College of Art, London
February 1986	England	Feargal Sharkey tour
February 1986	France	First World Freestyle Ski Championships, Tignes
Feb - Mar 86	Germany	Swatch Freestyle World Cup, Oberjoch
March 1986	Switzerland	"Arosa" Freestyle skiing weekend with retailers
March 1986	Austria	"Exposa" jewelry fair with Swatch balloons
March 1986	France	"Waterproof Paris": Daniel Larrieux's subaquatic ballet performance
Apr - Oct 86	Canada	Giant Swatch, Swiss Pavilion, Expo 86, Vancouver
May - Sept 86	Sweden	Swatch Funboard Cup sponsorship
June 1986	France	Fourth street art painting show, Swatch Magazine N° 4
June 1986	Italy	"Ssssuatchgala Mailand", launch event
July 86-Feb 87	Switzerland	First International Swatch Freestyle Youth Camp, Zermatt
July 1986	International	Second Himalaya Super Marathon sponsorship
July 1986	Netherlands	Drachenflug Festival sponsored by Swatch

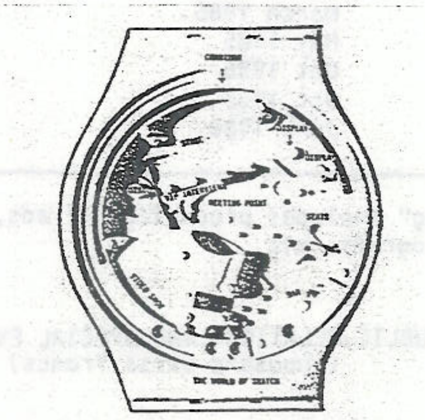
EXHIBIT 13 (cont'd)
SWATCH SPECIAL EVENTS


Japan

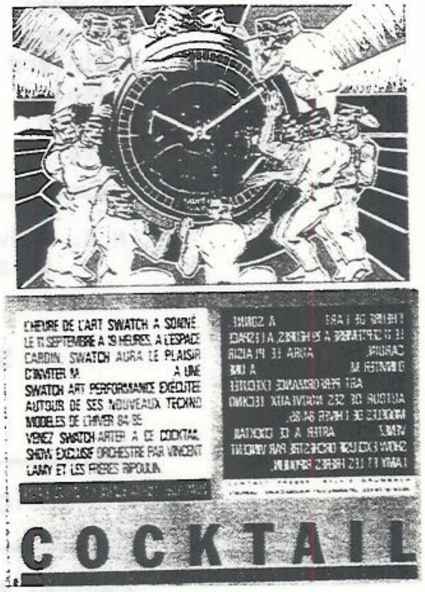

SWATCH
PRESENTE
la 1 exposition
mondiale de
street art painting.
69 PEINTRES
QUAI ST-BERNARD A PARIS
22 JUIN - 7 JUILLET 1986
France


SWATCH ® +
INTRODUCES THE FIRST IN A SERIES
OF 4 WATCHES BY
KEITH HARING
LIMITED EDITION OF
9,999 NUMBERED WATCHES
K. Haring
© 85
USA

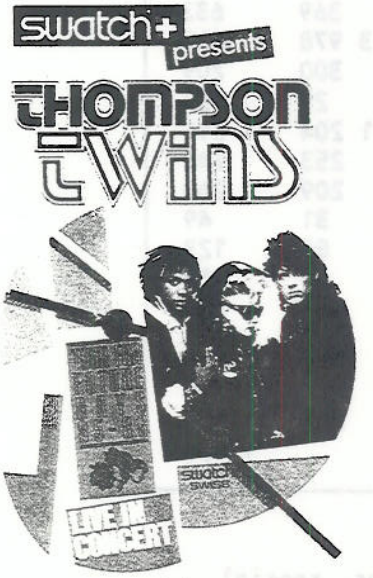

SWATCH O'CLOCK
France

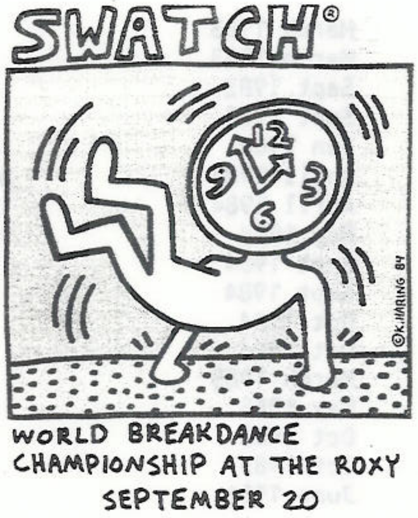

"Swatch-like" stand under a tent - BEA '84

West Germany


L'HEURE DE L'ART SWATCH A SONNÉ. LE 11 SEPTEMBRE A 19 HEURES, A L'ESPACE CARDIN, SWATCH AURA LE PLAISIR D'INVITER M. A UNE SWATCH ART PERFORMANCE EXECUTEE AUTOUR DE SES NOUVEAUX TECHNO MODELES DE L'HIVER 84/85. VENEZ SWATCH ARTER A CE COCKTAIL SHOW EXCLUSIF ORCHESTRE PAR VINCENT LAMY ET LES FRERES RIPOULIN.

France


swatch+
presents
THOMPSON
TWINS
LIVE IN CONCERT
USA


SWATCH®
©K.HARING 84
WORLD BREAKDANCE CHAMPIONSHIP AT THE ROXY SEPTEMBER 20

Qualification Rounds September 17 & 18
For Registration & Competition Information

USA

Switzerland

EXHIBIT 14

SWATCH ADVERTISING BUDGET
(thousand Swiss francs)

Country	Launch	1983	1984	1985	1986
Switzerland	March 1983	459	620	964	1 107
United Kingdom	March 1983	922	2 398	2 398	2 767
West Germany	Sept 1983	2 275	4 182	2 706	2 706
United States	Sept 1983		9 480	32 838	33 404
Austria	Jan 1984		244	429	472
France	April 1984		2 610	2 423	2 583
Belgium	April 1984		199	295	307
Netherlands	May 1984		148	430	369
South Africa	Sept 1984		301	133	92
Australia	Sept 1984		562	883	984
Norway	Oct 1984			243	246
Sweden	Oct 1984			571	615
Denmark	March 1985			151	184
Finland	May 1985			236	246
Japan	Oct 1985			NA	NA
Spain	Oct 1985			1 230	2 460
Italy	June 1986				3 524

N.B. "Advertising" includes production of ads, media spending, in-store programs, etc.

SWATCH PUBLIC RELATIONS AND SPECIAL EVENTS BUDGET
(thousand Swiss francs)

Country	Launch	1983	1984	1985	1986
Central Promotion Budget			3 690	4 920	6 150
Switzerland	March 1983			258	184
United Kingdom	March 1983			369	633
United States	Sept 1983			3 978	886
West Germany	Sept 1983			300	209
Austria	Jan 1984		29	29	37
France	April 1984		898	1 204	1 291
Belgium	April 1984		139	253	246
Netherlands	May 1984		118	209	260
South Africa	Sept 1984		18	31	49
Australia	Sept 1984			86	123
Norway	Oct 1984			47	80
Sweden	Oct 1984			77	209
Denmark	March 1985			*	61
Finland	May 1985			*	37
Japan	Oct 1985			NA	NA
Spain	Oct 1985			492	1 599
Italy	June 1986				1 458

*paid for by distributor

N.B. This budget includes music and sports promotions, special events, etc.

EXHIBIT 14 (cont'd)

1985 WATCH BRAND MEDIA SPENDING IN THE USA

BRAND	SHARE OF VOICE*
A-WATCH	1.15
BULOVA	0.60
CARTIER	0.83
CASIO	3.35
CERTINA	0.13
CITIZEN	10.33
EBEL	0.97
GUCCI	2.16
GUESS	0.03
HAMILTON	0.32
J. LASSALE	7.32
LONGINES	1.77
LORUS	4.36
OMEGA	1.02
PIAGET	1.56
PULSAR	9.74
RADO	1.87
ROLEX	5.05
SEIKO	11.17
SWATCH	7.05
TIMEX	15.22
TISSOT	0.32
Z-WATCH	0.01
TOTAL	86.32
OTHERS	13.68
TOTAL ADVERTISERS	100.00

* Share of voice = percent of total industry media spending

Source: compiled from 1985 Broadcast Advertisers Reports, Inc. and Publishers Information Bureau, Inc. figures

EXHIBIT 15

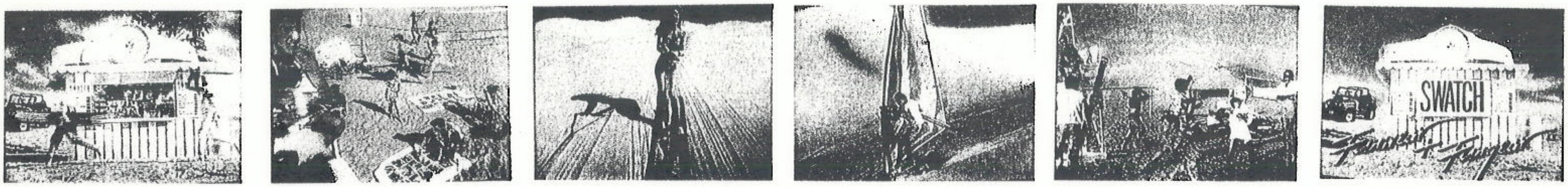
SELECTED SWATCH TV COMMERCIALS IN THE UNITED STATES

"FAT BOYS" - 1985

SWATCH. THE NEW WAVE IN SWISS WATCHES.

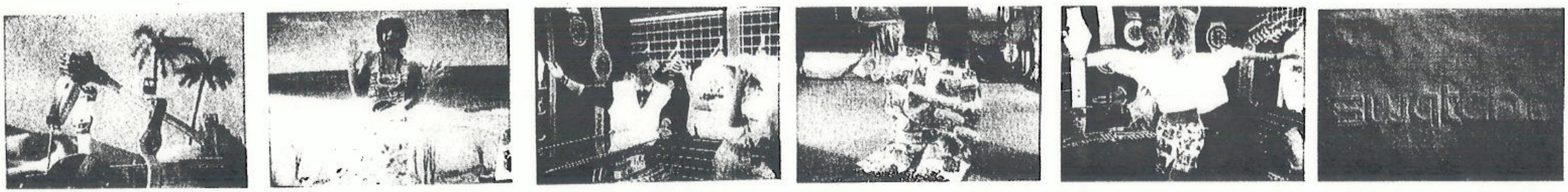
TEXT: "Swatch'" (opera music) "Oh, Fat Boys, where are you?" "Brrr, Swatch-up, ha ha ha, Swatch-up, tell the hands on the Swatch, oh the sister and the Swatch is water- and shock-resistant. Brrr, Swatch-up, Swatch-up. The new wave in Swiss watches, Swatch!"

"FUNWEAR & FUNGEAR" - 1986


SWATCH
Funwear & Fungear

TEXT: "Swatch! Swatch! Funwear and fungear."

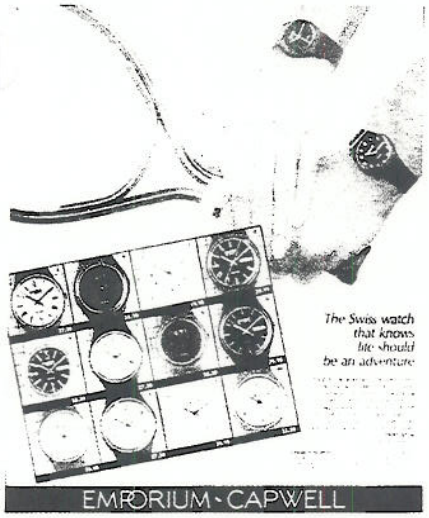
"NEFERTITI-SARONG" - 1986



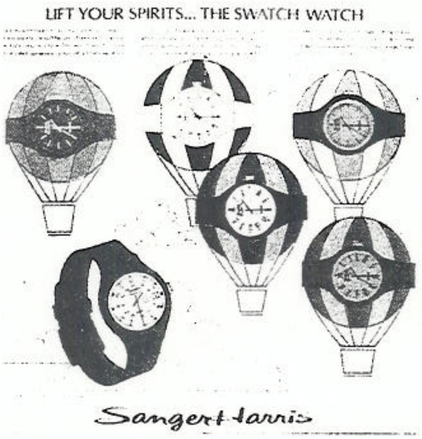
TEXT: "Swatch! Nefertiti! The enemy is near, put your Swatch guards on. Whoa! Oh, we'll attack from here. Fire! Ha, ha, ha!" Sarong - "La, la, la. Oooh, aaah, oh, my! Aaah...""May I help you?" "Yes, I, aah... I like this one!"

EXHIBIT 15 (cont'd)

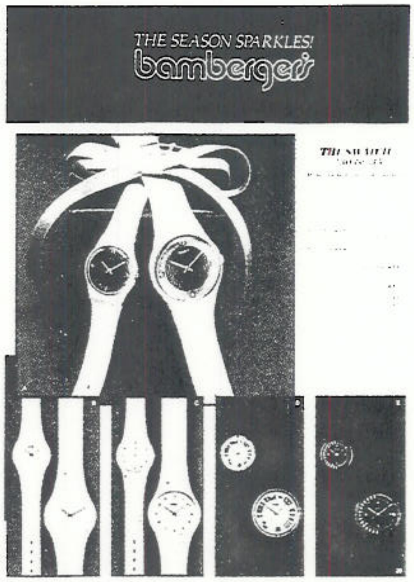
SELECTED SWATCH PRINT ADS IN THE UNITED STATES


The Swiss watch
that knows
life should
be an adventure
EMPORIUM · CAPWELL

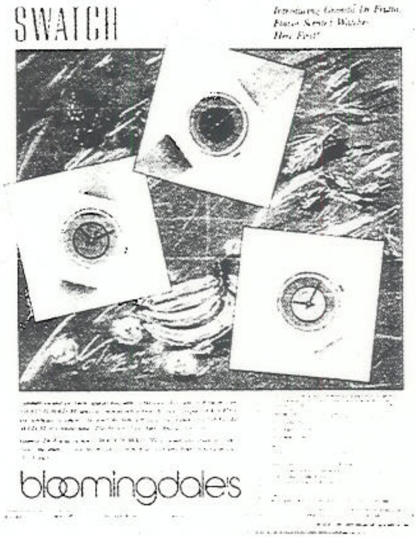
Spring 1983


LIFT YOUR SPIRITS... THE SWATCH WATCH
Sanger-Harris

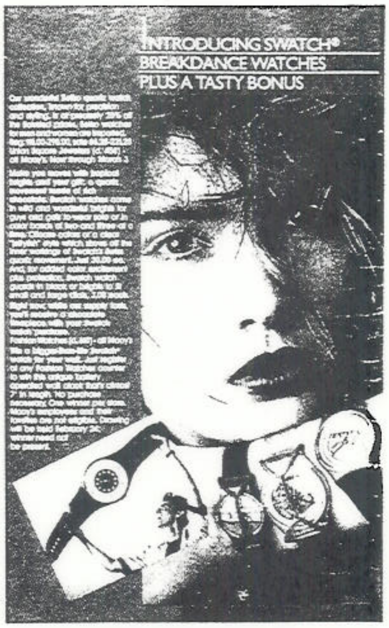
Fall 1983


THE SEASON SPARKLES!
bamberger's

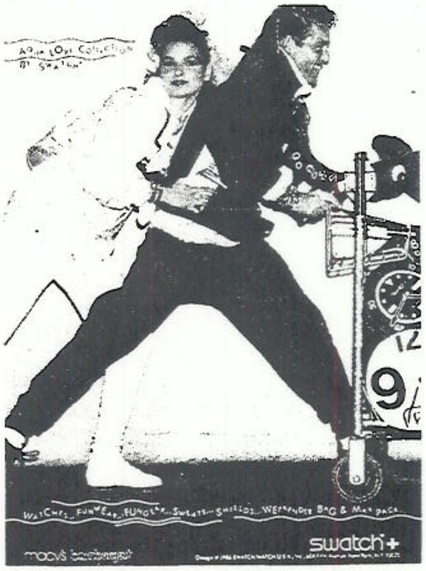
Christmas 1984


SWATCH
bloomingdale's

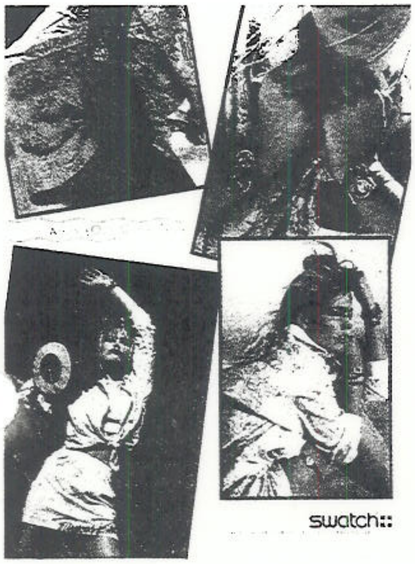
Spring 1985


INTRODUCING SWATCH®
BREAKDANCE WATCHES
PLUS A TASTY BONUS

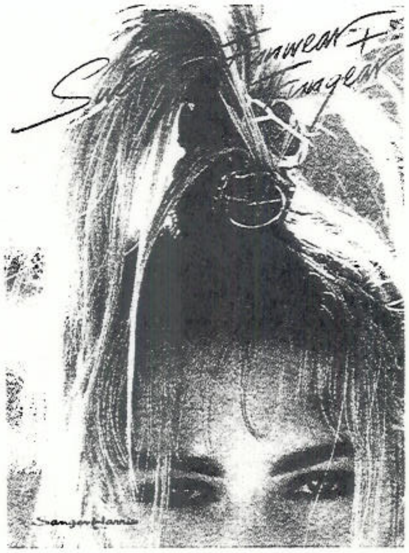
Spring 1985


A Fun Love Collection By Swatch
WATCHES...FUNWEAR...FUNGEAR...SWEATS...SHIELDS...WEEKENDER BAG & MAX PACK
macy's bamberger's
swatch+

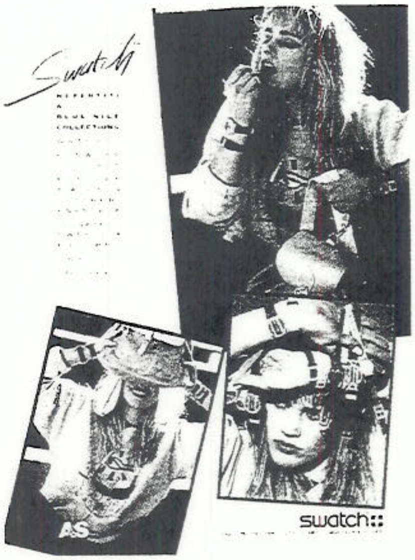
Summer 1986



Summer 1986


Funwear + Swagear
Sanger-Harris

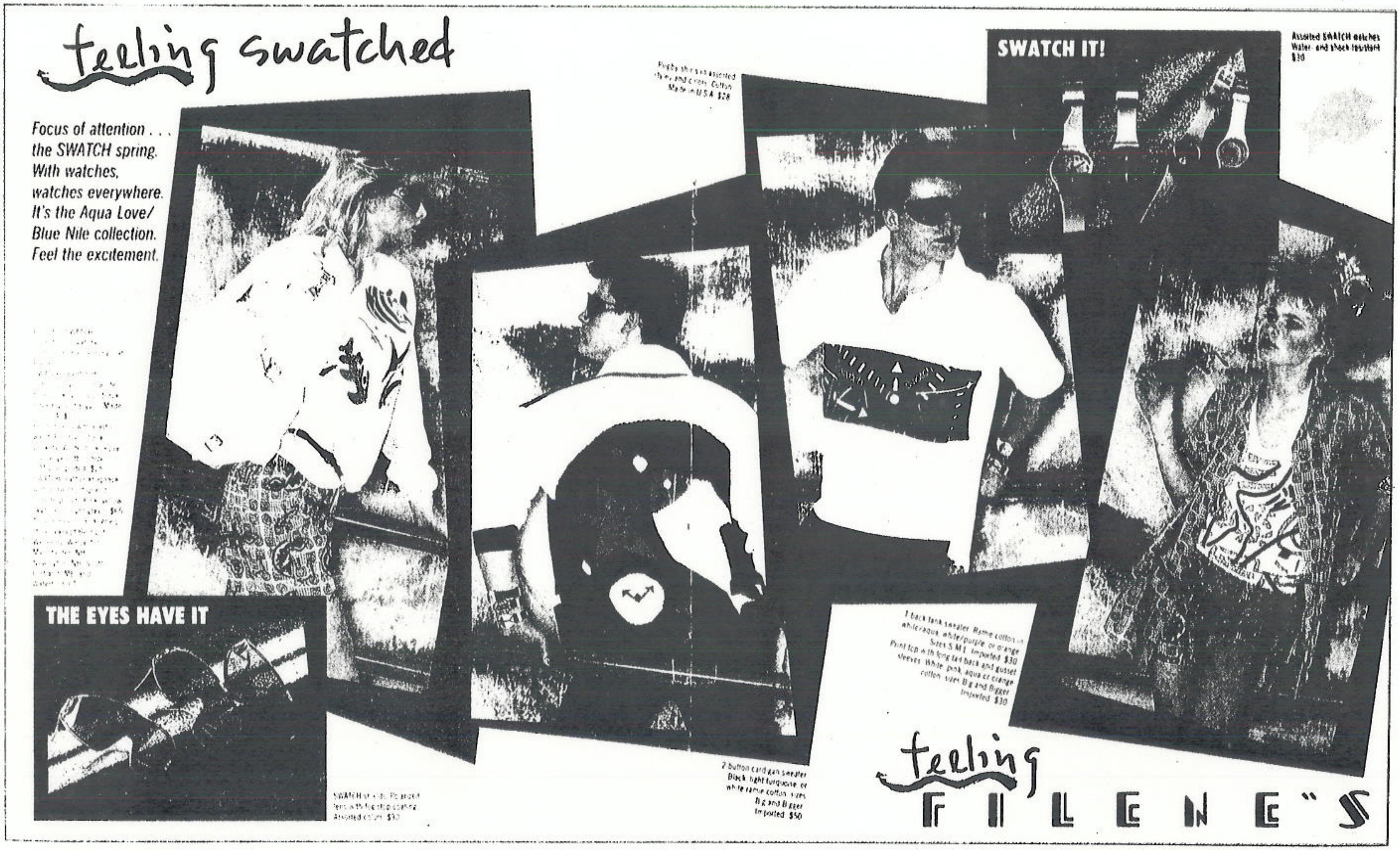
Summer 1986


Swatch
swatch::

Summer 1986

EXHIBIT 15 (cont'd)

SELECTED SWATCH PRINT ADS IN THE UNITED STATES - 1986


feeling swatched
SWATCH IT!
THE EYES HAVE IT
feeling FILENE'S

Focus of attention . . .
the SWATCH spring.
With watches,
watches everywhere.
It's the Aqua Love/
Blue Nile collection.
Feel the excitement.

Assorted SWATCH watches
Water- and shock-resistant
$30

Rugby shirts in assorted
stripes and colors. Cotton.
Made in U.S.A. $28

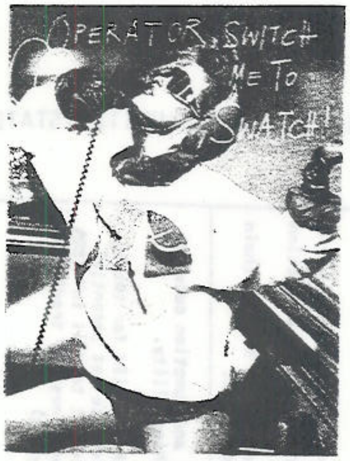
T back tank sweater. Ramie cotton in
white/aqua, white/purple or orange.
Sizes S M L. Imported $30
Print top with long tail back and gusset
sleeves. White, pink, aqua or orange
cotton. Sizes Big and Bigger.
Imported $30

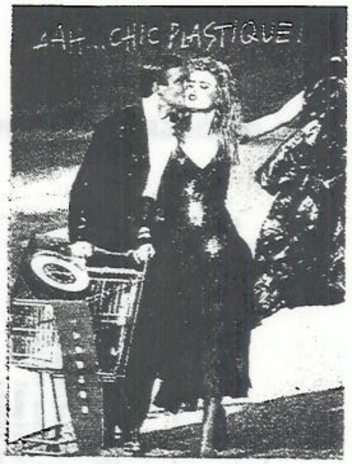
2 button cardigan sweater.
Black, light turquoise or
white ramie cotton. Sizes
Big and Bigger.
Imported $50

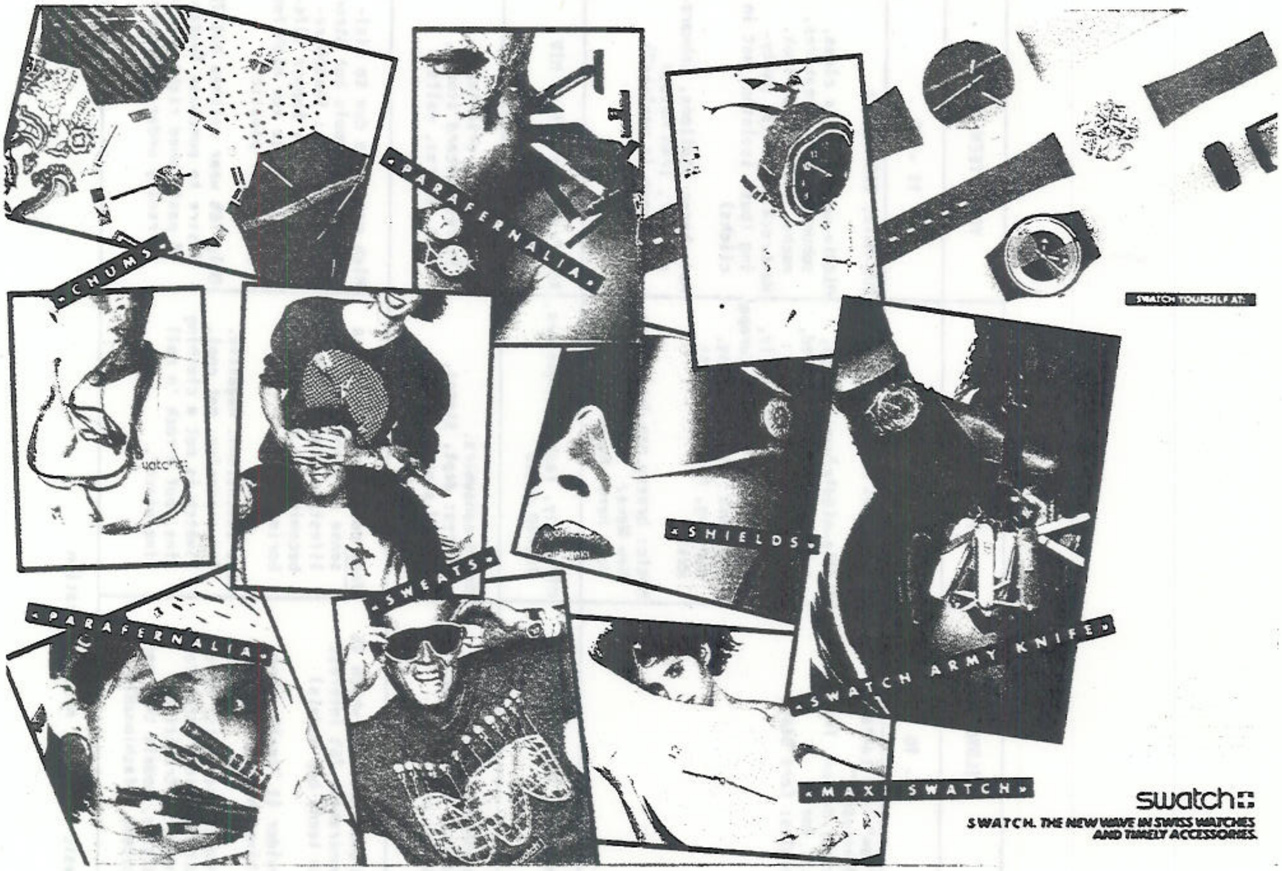
SWATCH [illegible] Polarized
lens with [illegible] coating.
Assorted colors $30

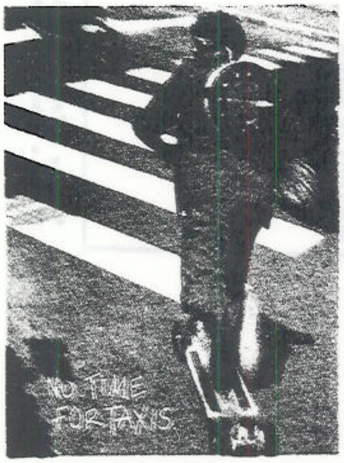
EXHIBIT 15 (cont'd)

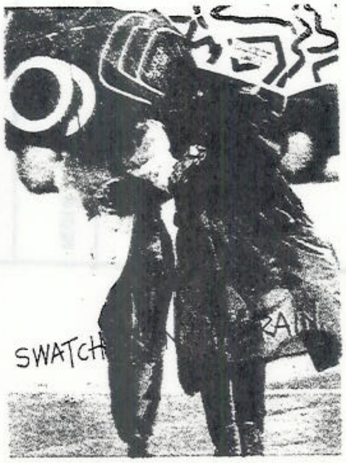
SELECTED SWATCH PRINT ADS IN THE UNITED STATES - 1986


OPERATOR, SWITCH ME TO SWATCH!


AAH...CHIC PLASTIQUE!


PARAFERNALIA
CHUMS
SWATCH YOURSELF AT:
SHIELDS
SWEATS
PARAFERNALIA
SWATCH ARMY KNIFE
MAXI SWATCH
swatch
SWATCH. THE NEW WAVE IN SWISS WATCHES AND TIMELY ACCESSORIES.


NO TIME FOR TAXIS


SWATCH
RAIN

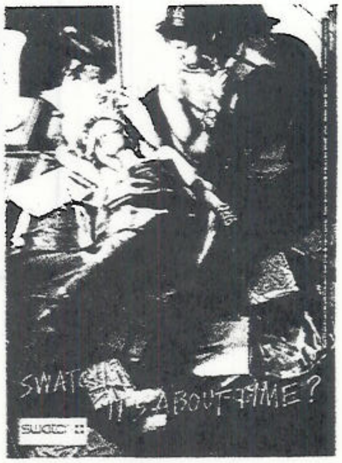

SWATCH
IT'S ABOUT TIME?
swatch

EXHIBIT 16

A PSYCHOGRAPHIC SEGMENTATION OF CONSUMERS IN THE UNITED STATES

	CHILDREN	TEENY BOPPERS	YOUNG TEEN ROCKERS	STUDENTS
AGE	6 - 10	11 - 15	11 - 15	11 - 15
PROFILE/INTERESTS	TV: "Jem" rock cartoon, "Nickelodeon". Males: He-man, Transformers, G.I. Joe Females: Care Bears	Almost 100% Female. Middle-middle/upper class, suburban, click-oriented, very fashion conscious : trendy, outrageous style, favor So.Calif. over Europe/NYC look . Like partying, dancing, hanging-out at malls. Music: breezy pop love songs, New Wave. Main hero: Madonna.	80% Male, 20% Female Middle-upper/middle class, suburban, mall-creatures, macho, heavy-metal look. Hard rock concerts, partying (but isolated, not in clicks) Main heros: Stallone, Schwarzenegger, Iron Maiden ("Madonna is useless")	50% Male, 50% Female Middle-lower/middle class, very conservative, like professional and participation sports. Music: no allegiance to type of music or artist
MEDIA	Network TV, MTV*	MTV-crazy, fashion magazines, Top-40 radio	AOR**radio, critical MTV watchers	Network TV, AM radio
SHOPPING HABITS	Dependent on parents. Stores: dept. stores, malls, etc.	Heavy consumers. Stores: dept. stores, record stores, malls.	Not shopping oriented. Stores: record stores, dept. stores, malls.	Consider shopping a function not an event. Stores: Sears, K-Mart, chain drug stores.
REACTIONS TO SWATCH	42% awareness (of which 4% ownership, 76% interest in teeny bop models) Consider it "cool", something the big kids wear Parents' interests: durability, price, large face numbers, traditional styles, models that won't become unfashionable	Very positive - provides a sense of identity - is a lifestyle magnifier but becoming too commonplace, boring. Line extensions: negative. Too expensive, not cool, "Swatch is not a clothing line, but a rock 'n roll time piece".	High awareness due to visibility in schools but strong negative bias: Swatch represents teeny bopper lifestyle, "price too high for a piece of plastic". Only 16% wear watches but 72% desire to purchase Swatch if positioned right (NB: are currently under-symboled).	Price and function outweigh fashionability. Swatch too wild for their lifestyle yet potential interest to "fit in" (80% unawareness of traditional styles.)

* MTV = a leading national "basic cable" TV music TV station
** AOR = Album Oriented Rock

EXHIBIT 16 (cont'd)

	ROCKERS	PREPPIES	TRENDIES
AGE	16 - 22	16 - 22	16 - 22
PROFILE/INTERESTS	60% Male, 40% Female Long hair, click-oriented, committed to rock groups, very frequent concert-goers (for music, not as a social event). Like fast cars, comedy and horror movies, 100% American rock 'n roll. Dislike short hair, New Wave, disco. Music: pure rock 'n roll (no synthesizers, drum machines). Hero: ZZ Top	Career-oriented, traditional views, "controlled" wildness in style (designs more than colors), concerts (more as social event than for music), participation sports. Like dating, movies. Music: "Yuppie" rock/folk/pop. Like songs more than artists.	Movement similar to hippies but smaller scale. Exist only in US art and culture capitals. Avant-garde tastes; outspoken on issues they consider important. Left socially and politically. Go to clubs, not concerts. Music: anti rock 'n roll, anti-popular groups
MEDIA	AOR* radio, MTV (77% regular viewers)	Cable TV, some MTV, some fashion magazines, radio (AOR*, CHR*, Light Rock mix) but low station loyalty	Trendy, artsy magazines and newspapers. Anti-MTV, anti-commercial radio
SHOPPING HABITS	Like all "things American"	Stores: mainstream dept. stores	Consider fasion a vehicle of expression, rejection of anything too popular
REACTIONS TO SWATCH	Aware of wild Swatch styles only. Like its disposability, price. Dislike what it stands for: glitzy, hi-tech graphics, New Wave, dancing, slick ads, male model geeks. "A girl's/bopper's watch". Consider multiple Swatch ownership too trendy.	92% awareness - prefer traditional designs, price, fashionability, reliability, practicability. Dislike its young teen image. 73% prefer dressier watches (silver/gold Rolex look) for "special events"; strongly anti-"digital". Line extensions: too expensive, unnecessary	73% wear no watch. Very negative image of Swatch: "a rip-off", "a toy"; the corporate world, "fast-food of time pieces".

*AOR = Album oriented rock; CHR = Contemporary hits radio

EXHIBIT 16 (cont'd)

	TRANSITIONARIES	OLDER CASUALS	WEEKEND HIPPIES
AGE	22 - 32	22 - 43	33 - 49
PROFILE/INTERESTS	Conservative, social climbers. Like wildness (as observers, not participants), competitive sports. Music: "intelligent" rock 'n roll	The hidden mainstream, ultra-conservative, very family-oriented, fast-food patrons, socially inactive, disinterested in fashion. Music: traditional	Mellowed former hippies. Look like but hate being called Yuppies; still subscribe to basic 60's principles. Music: mood music, "New Age" movement.
MEDIA	Females: fashion magazines Males: Time, Newsweek, Sports Illustrated. Not MTV (only 16% regular viewers)	Network TV. Local newspapers (even National Enquirer-type tabloids)	Cable TV (critical viewers) but no MTV, radio (as background music). Weekend newspaper supplements, traditional magazines (i.e. Time, Newsweek, etc)
SHOPPING HABITS	Pro-American but respectful of foreign made goods; appreciate quality/value; balance between fashion and conservatism. Stores: major mainstream dept. stores (91% source of potential Swatch purchase for 76% aware)	Traditional brands (e.g. Timex, Bulova, Casio for watches).	Heavy shoppers, appreciate quality products. Stores: upscale dept. stores (I.Magnin, Saks) for females. Mainstream dept. stores for men
REACTIONS TO SWATCH	Positive: consider it a great leisure tool, like its durability, disposability, price, reliability. Line extensions: high awareness but overpriced for females, not really credible for males	Watches are functional. Awareness: 12% aided 4% unaided	High awareness but 43% of those aware have never seen one. Cheap, teen-item image; but like functionality, light weight, durability. Line extensions: overpriced, not functional, too gaudy. High awareness of competing brands.

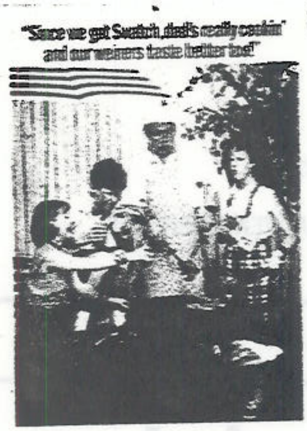
Source: compiled from a Burkhard, Abrams, Douglas, Eliot market study, 1986

EXHIBIT 16 (cont'd)

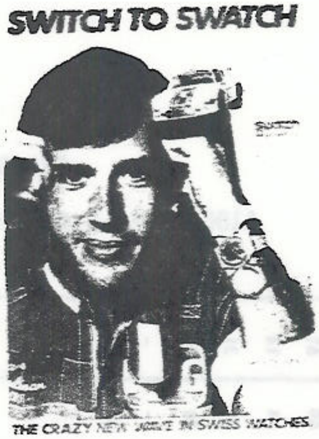
RESULTS

iked by teeny pers, too "young teeny" for all others. "Camp" humor was appreciated but considered too like "MTV parents". The caption was considered humorous but the visual too unrealistic for adult parents.

1.


"Since we got Swatch, dad's really cookin' and our weiners taste better too!"

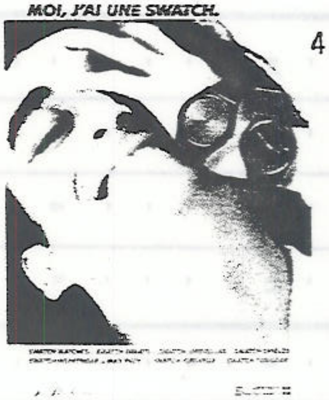
2.


SWITCH TO SWATCH
THE CRAZY NEW WAVE IN SWISS WATCHES

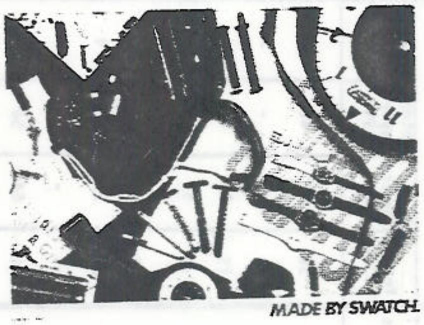
2. Good idea, poorly executed, not credible. The sports car was positive for males but the model was too unrealistic, too slick. "Race drivers would not wear 3 watches". The caption was felt to evoke the potential decline of the Swatch trend. The cars were considered too European and sophisticated.

3. Males of all ages except Trendies felt the foreign language caption was counter-productive to the need for Swatch to move away from European "New Wave" clichés.

3.


MOI, J'AI UNE SWATCH.

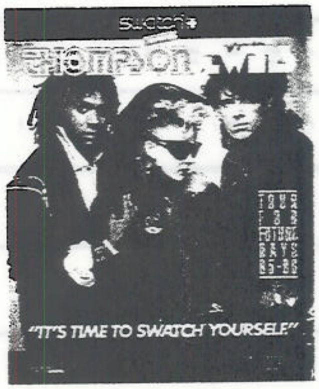
4.


MADE BY SWATCH.

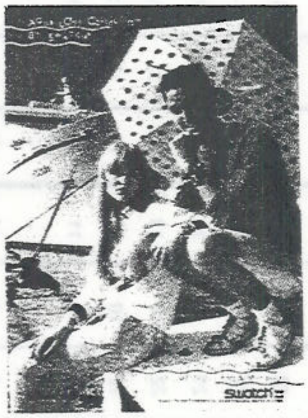
4. These items were only of interest to a very fashion-conscious minority. The ad tended to reinforce the trendy aspect of the Swatch look, a major concern for potential buyers. Most respondents wouldn't buy a Swatch pen or razor.

5. The Thompson Twins tend to reinforce the young teen image. Use of another group, still appreciated by the teens but more accessible to older, potential and existing Swatch customers (e.g. Transitionaries, Preppies and Rockers) was advised.

5.


swatch
THOMPSON TWINS
"IT'S TIME TO SWATCH YOURSELF"

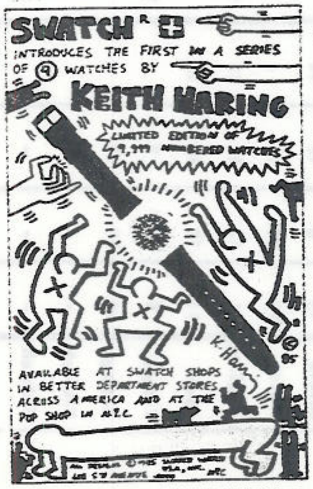
6.



6. The "collection" concept appealed to most teen females but 1) What is it and what does it mean?, 2) this concept aroused suspicion mostly among 16-32 age males that it was a ploy to push sales of Swatch non-watch gear.

7. There is limited awareness of Keith Haring outside New York but the ad tested well since most people like animation. Only complaint:"too sco".

7.


SWATCH
INTRODUCES THE FIRST IN A SERIES OF 9 WATCHES BY
KEITH HARING
LIMITED EDITION OF 9,999 NUMBERED WATCHES
K. Haring
AVAILABLE AT SWATCH SHOPS IN BETTER DEPARTMENT STORES ACROSS AMERICA AND AT THE POP SHOP IN N.Y.C.

8.

8. 43% of respondents recognized Bruce Jenner but he was considered too "goody-goody", even for young teen female prior fans.

EXHIBIT 17

AIDED RECALL OF WATCH ADVERTISEMENTS

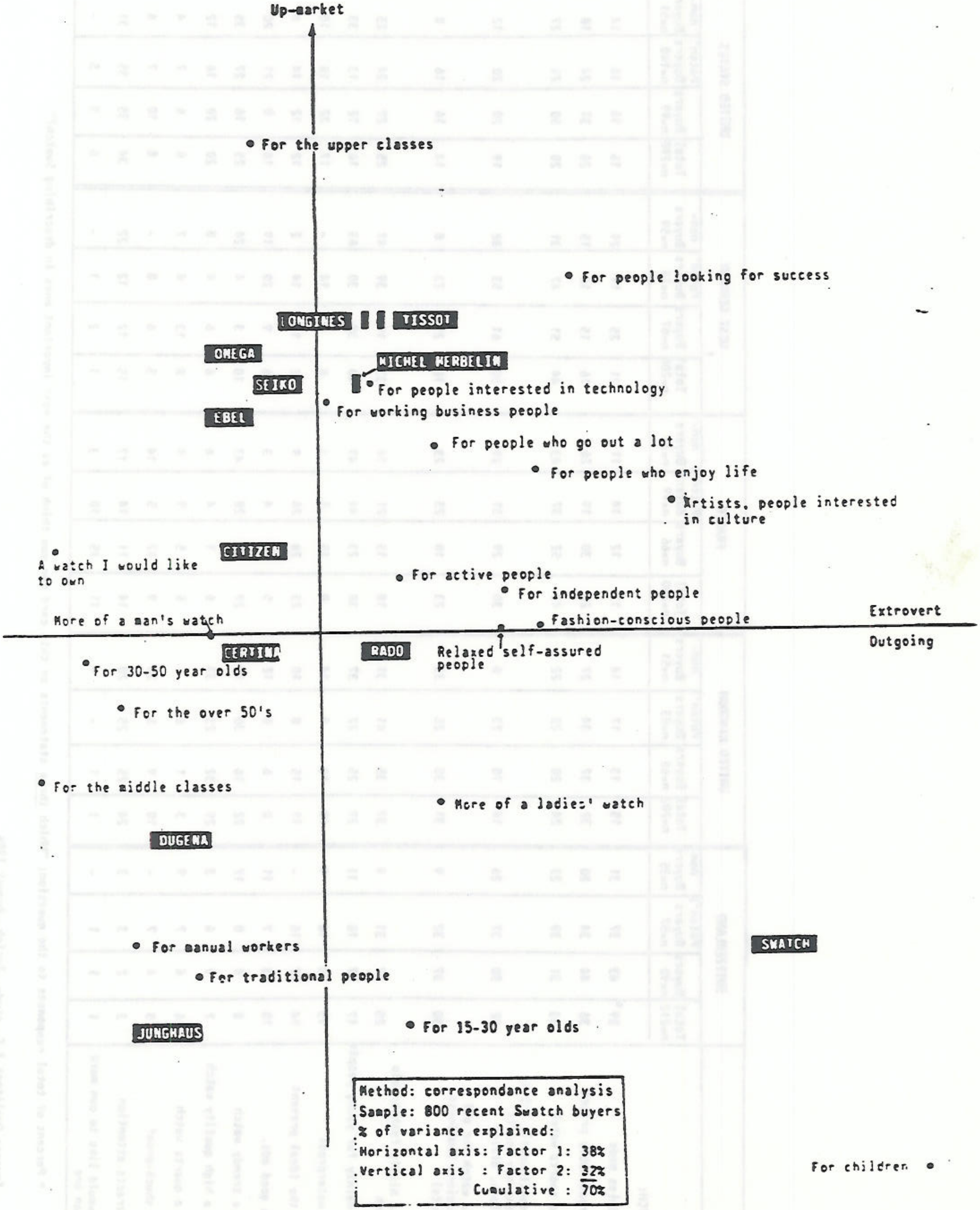
BRAND	UNITED STATES				SWITZERLAND				UNITED KINGDOM				FRANCE				WEST GERMANY			
	Total n=290	Buyers n=99	Poten'l Buyers n=140	Non-Buyers n=51	Total n=212	Buyers n=90	Poten'l Buyers n=87	Non-Buyers n=35	Total n=202	Buyers n=68	Poten'l Buyers n=83	Non-Buyers n=51	Total n=200	Buyers n=66	Poten'l Buyers n=99	Non-Buyers n=35	Total n=200	Buyers n=67	Poten'l Buyers n=74	Non-Buyers n=59
Swatch	67*	79	68	47	78	88	70	74	50	56	53	39	50	62	46	34	67	70	69	61
Omega	6	9	6	-	19	22	17	14	5	10	-	8	-	-	-	-	19	18	24	14
Rolex	31	32	25	45	20	29	10	23	17	16	22	12	15	17	12	17	34	31	39	31
Seiko	35	35	36	29	16	22	6	23	30	35	28	27	30	32	30	26	31	30	36	25
Cartier	14	7	16	25	16	22	10	11	11	12	13	6	-	-	-	-	-	-	-	-
Timex	41	37	46	35	4	3	2	11	23	26	19	24	21	23	23	9	22	24	26	15
Gucci	16	17	15	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Citizen	18	17	21	12	5	3	3	11	15	18	18	6	58	64	56	49	-	-	-	-
Pulsar	11	12	14	-	-	-	-	-	-	-	-	-	4	3	5	-	6	16	-	-
Bulova	10	6	12	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Casio	10	14	11	-	6	7	5	6	11	15	11	6	11	11	10	14	-	-	-	-
Longines	11	12	11	12	15	18	9	20	3	6	4	-	-	-	-	-	13	13	11	14
Guess	14	18	12	14	-	-	-	-	9	13	10	4	-	-	-	-	-	-	-	-
Tissot	8	12	7	-	50	50	45	60	4	4	6	-	-	-	-	-	12	14	11	10
A-Watch	10	10	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
K-Watch	-	-	-	-	-	-	-	-	-	-	-	-	4	6	3	-	-	-	-	-
M-Watch	-	-	-	-	13	18	6	20	-	-	-	-	-	-	-	-	-	-	-	-
Club Med	-	-	-	-	-	-	-	-	-	-	-	-	5	6	2	9	-	-	-	-
Dugena	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	15	15	15
Kiplé	-	-	-	-	-	-	-	-	-	-	-	-	11	12	10	9	-	-	-	-
Lorus	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yéma	-	-	-	-	-	-	-	-	-	-	-	-	14	17	12	14	-	-	-	-

* Percent of total responses to the question, "Which of the watches on this list have you recently seen or heard advertised recently?" No figure indicates that the brand was not listed on the card

Source: comp' from a Qualitest A.G. study, Zurich, August, 1986

EXHIBIT 18

A PERCEPTUAL MAP OF SWATCH AND OTHER LEADING BRANDS IN WEST GERMANY



Method: correspondance analysis
Sample: 800 recent Swatch buyers
% of variance explained:
Horizontal axis: Factor 1: 38%
Vertical axis : Factor 2: 32%
Cumulative : 70%

Source: ECS Conseil ..4.. August 1986

EXHIBIT 19

IMAGE OF SWATCH 1986

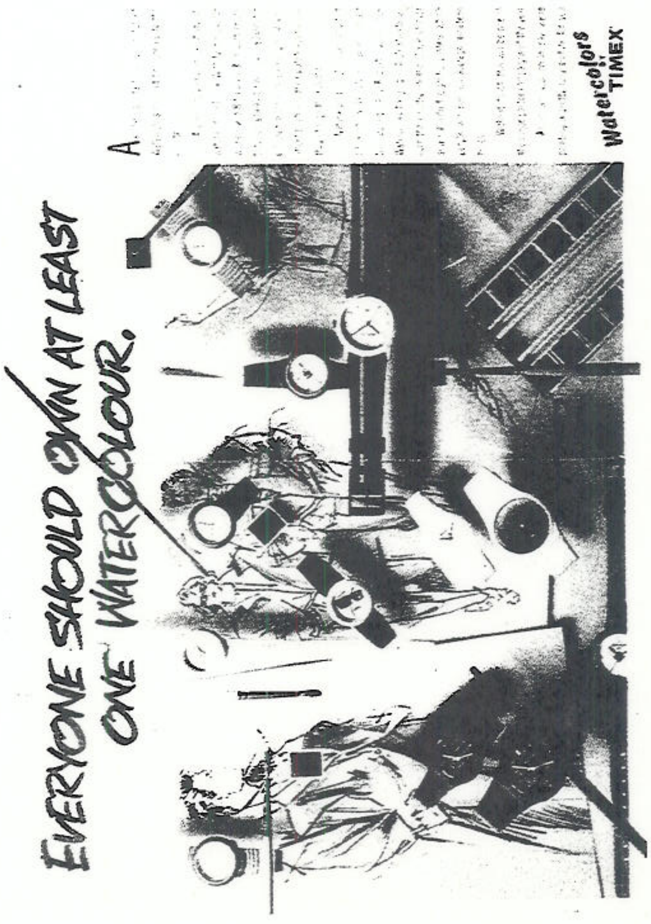
	SWITZERLAND				UNITED KINGDOM				FRANCE				WEST GERMANY				UNITED STATES			
	Total n=212	Buyers n=90	Poten'l Buyers n=87	non-Buyers n=35	Total n=202	Buyers n=68	Poten'l Buyers n=83	non-Buyers n=51	Total n=200	Buyers n=66	Poten'l Buyers n=99	non-Buyers n=35	Total n=200	Buyers n=67	Poten'l Buyers n=74	non-Buyers n=59	Total n=290	Buyers n=99	Poten'l Buyers n=140	non-Buyers n=51
SWATCH:																				
is Swiss made	39*	43	37	31	15	13	17	14	13	12	14	11	21	25	11	29	16	16	16	14
is reasonably priced	36	44	34	20	32	32	34	27	24	30	19	26	16	15	16	15	26	31	24	18
is a sports watch	33	31	39	23	24	28	23	22	43	52	37	43	44	51	47	31	28	30	26	27
is continuously introducing new models (colors, dials)	32	30	37	26	14	10	23	6	30	29	31	29	50	61	53	32	19	20	20	12
is a watch for all occasions (business, sports)	30	37	32	9	31	35	25	33	23	18	25	23	18	21	23	8	14	16	16	8
is a highly fashionable watch	25	27	31	9	37	35	41	31	18	15	21	14	33	19	39	41	25	27	24	25
is mainly for young people	17	17	18	11	27	25	22	37	38	23	44	49	40	30	30	63	16	12	13	33
is waterproof	15	16	16	9	10	10	8	14	8	15	5	3	8	9	14	-	17	22	16	10
is the ideal present	14	17	16	-	11	15	8	10	23	26	26	9	12	18	14	2	12	12	14	6
has good ads.	10	13	7	11	8	6	8	12	5	8	4	3	16	9	20	19	16	8	21	20
is a trendy watch	8	4	8	17	22	16	30	18	29	21	28	43	10	3	4	24	25	16	27	35
is a high quality watch	7	9	6	3	29	32	23	33	6	9	4	6	6	6	4	8	20	28	16	12
is a quartz watch	6	4	7	9	3	1	6	-	8	5	9	9	8	13	4	7	6	6	7	4
is shock-proof	5	4	7	-	10	9	5	20	9	12	5	14	5	6	8	-	8	10	7	6
attracts attention	3	2	3	3	24	25	25	20	14	11	14	17	15	12	12	22	34	35	35	31
I would like to own more than one	1	1	1	-	1	1	-	-	11	15	10	3	1	2	1	-	6	9	5	-

* Percent of total responses to the question: "Which three statements on this card can you think of as the most important ones in describing Swatch?"

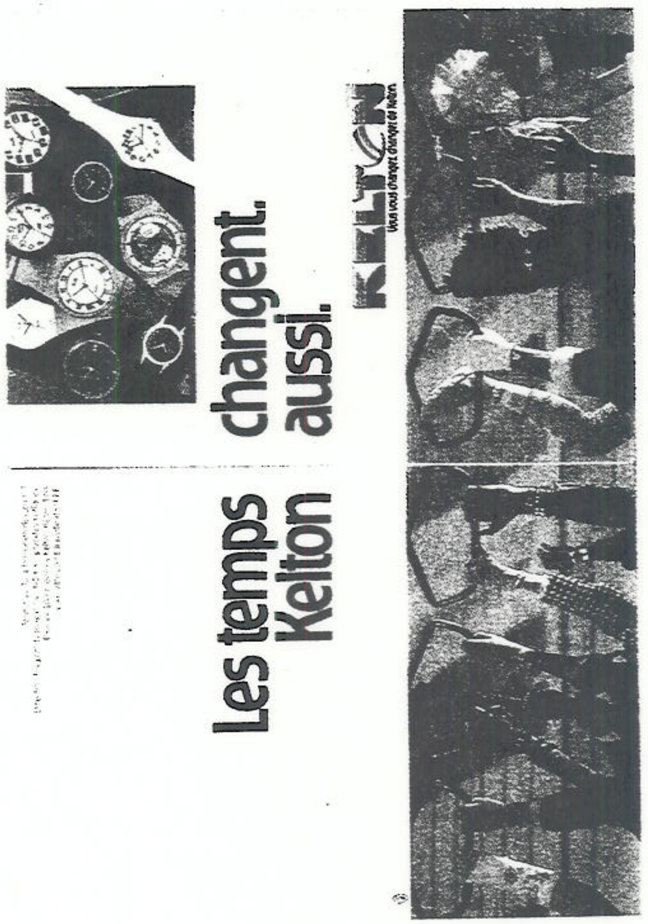
Source: Qualitest A.G. study, Zurich, August 1986

EXHIBIT 20

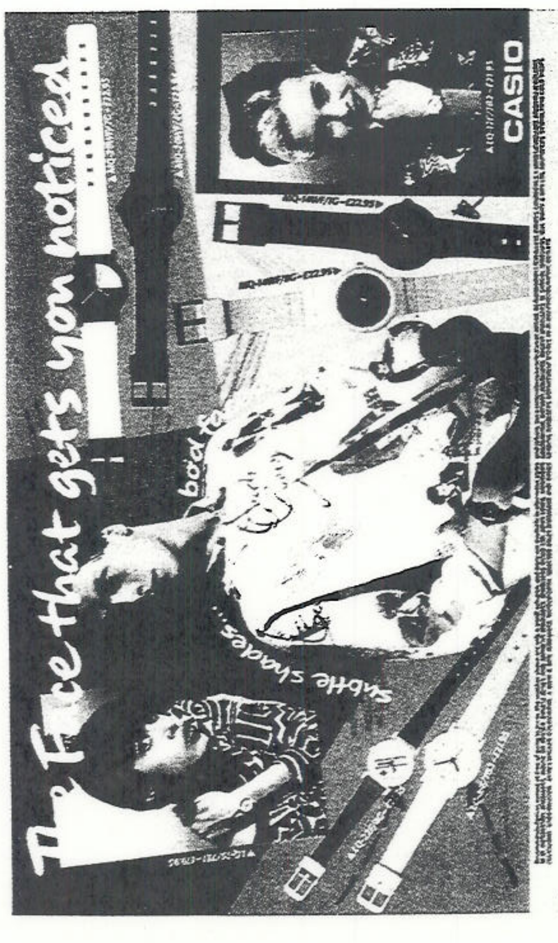
SELECTED SWATCH COMPETITORS


EVERYONE SHOULD OWN AT LEAST ONE WATERCOLOUR.
Watercolors! TIMEX

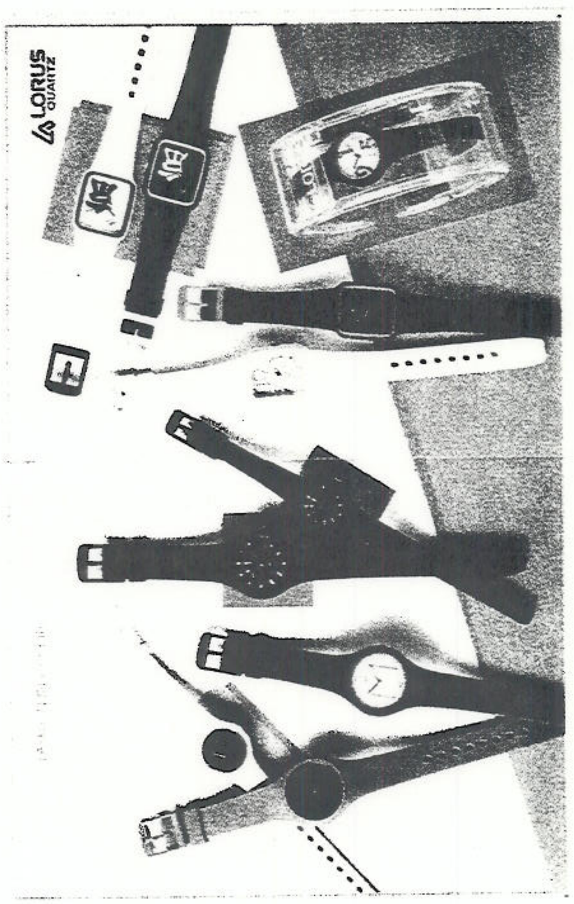
Timex


Les temps Kelton changent. Kelton aussi.
KELTON
Vous vous changez, changez de Kelton.

Kelton

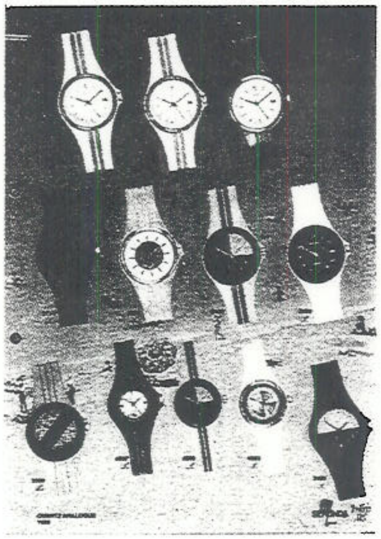

The Face that gets you noticed
subtle shades
bold
CASIO

Casio


LORUS QUARTZ

Lorus

EXHIBIT 20 (cont'd)



Sekonda

THERE'S A "SIXTY" TO COLOR EVERY MOMENT
SIXTY

Sixty

elles sont folles...
... les Dingues* de Beuchat
elles tournent à l'envers...
... les ACW* de Beuchat

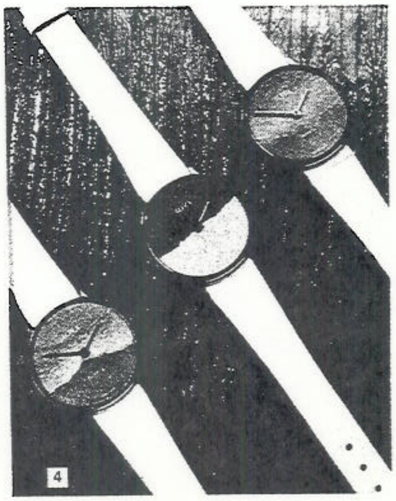
Beuchat

Collection 86
Water resistent Choc proof
Swiss Quartz Swiss Made
Sweet-zerLand
SWISS MADE

Sweet-zerland

Coca-Cola
WATCHES

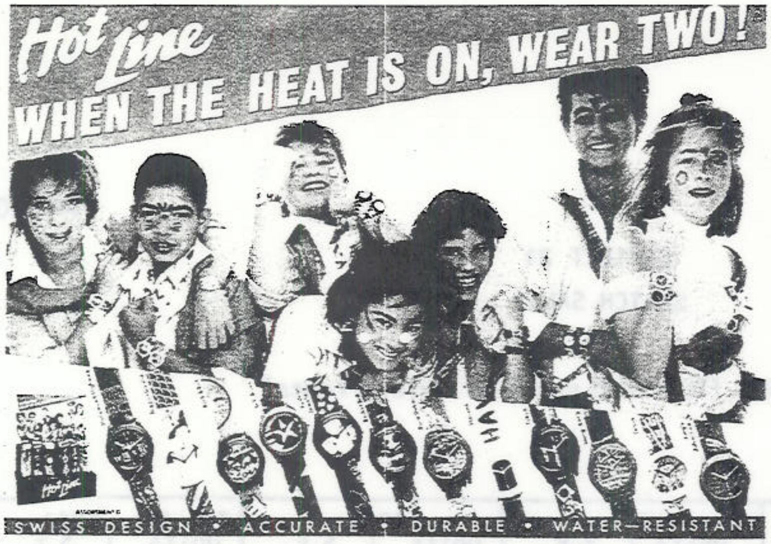
Coca-Cola



Alfex

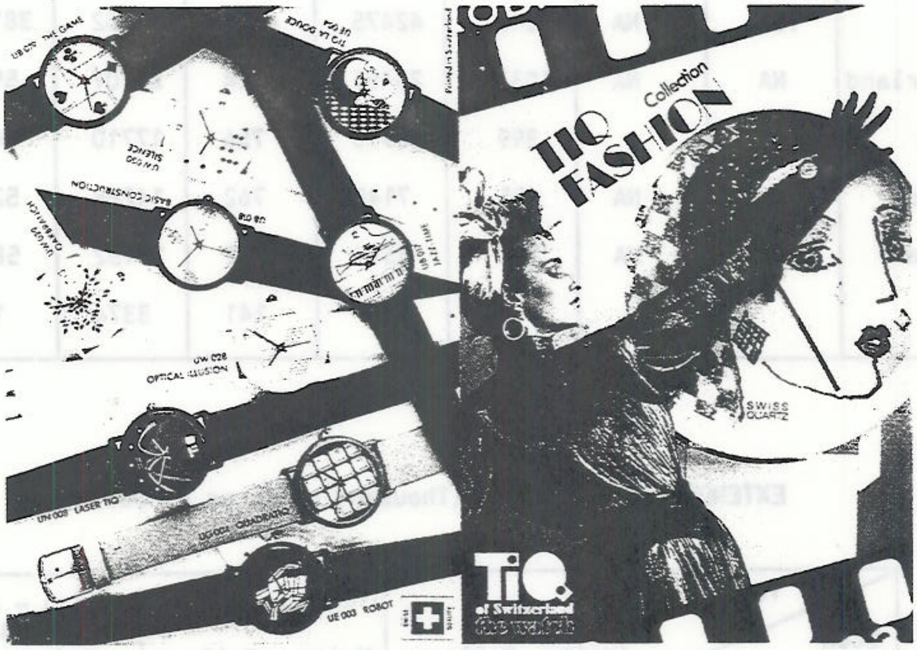
Montres
Club Méditerranée
by Marckley

Club Med

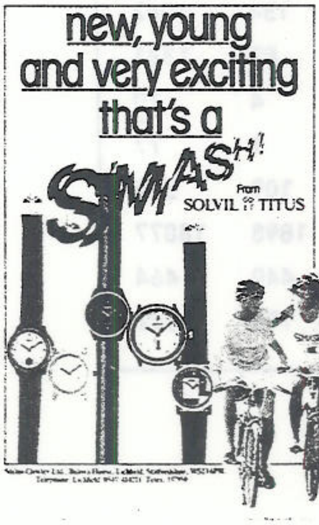

Hot Line
WHEN THE HEAT IS ON, WEAR TWO!
SWISS DESIGN • ACCURATE • DURABLE • WATER-RESISTANT

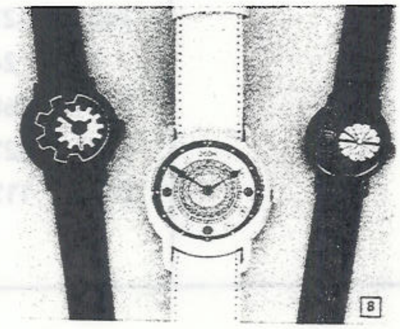
Hotline

Le Clip

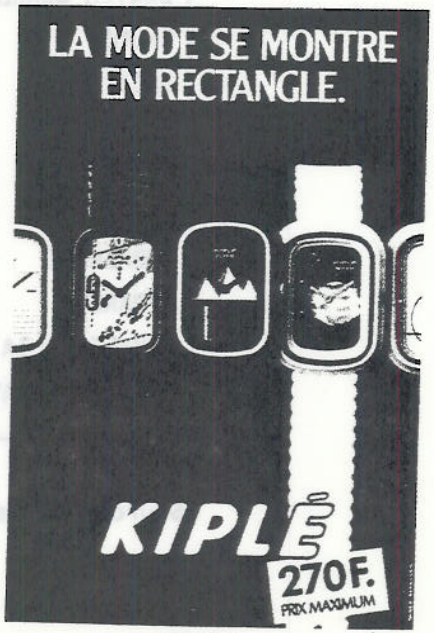

UB 020 THE GAME
TIQ LA DOUCE
UN 030 SILENCE
BASIC CONSTRUCTION
UN 028 OPTICAL ILLUSION
UN 003 LASER TIQ
UG 003 QUADRATO
UB 003 ROBOT
TIQ FASHION Collection
SWISS QUARTZ
Tiq of Switzerland
the watch

Tiq


new, young
and very exciting
that's a
SMASH!
From
SOLVIL ET TITUS



Zeon


LA MODE SE MONTRE
EN RECTANGLE.
KIPLÉ
270F.
PRIX MAXIMUM

Smash

EXHIBIT 20 (cont'd)

Kiplé

EXHIBIT 21

SWATCH SALES

SWATCH WATCHES (Thousand units or Swiss Francs)

Year / Country	1983		1984		1985		Jan-Aug 1986	
	Units	S.F.	Units	S.F.	Units	S.F.	Units	S.F.
World	1319	27901	4496	114057	10168	284832	8321	209954
USA	135	NA	1242	42475	4659	167562	3817	102824
Switzerland	NA	NA	1032	23451	924	21707	595	14585
France			399	8910	756	17710	667	14824
England	NA	NA	455	7140	762	14288	524	9694
W.Germany	NA	NA	202	4514	712	17152	587	16837
Japan					141	3374	18	646

EXTENDED PRODUCT LINE (Thousand units or US Dollars)

Year / Item	1984		1985		Jan - Aug 1986	
	Units	Dollars	Units	Dollars	Units	Dollars
SWATCH GUARDS	7	10	3617	4280	2637	3721
CHUMS	13	26	104	226	24	6
BAGS			224	2497	134	1042
SHIELDS			141	2418	87	1381
KNIVES			263	1236	4	20
CLOCKS			4	248	1	77
UMBRELLAS			181	1606	109	359
APPAREL			620	6279	1898	18877
PARAFERNALIA			387	1175	440	464
COCA COLA WATCHES					194	3392

Source: Company records (disguised data)

Harvard Business School **577–042**

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WHARTON REPROGRAPHICS

Federal Express (A)

Assistant Professor Christopher H. Lovelock prepared this case as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

It was one o'clock in the morning at Memphis International Airport. The lights of an approaching aircraft grew brighter as it descended toward the runway, while more aircraft lights appeared in the distant sky. "They'll be landing every few minutes from now on," said Heinz J. Adam to the visitor he was showing around the Federal Express distribution "hub." Adam, Federal's director of marketing administration, was referring to his company's fleet of 32 Falcon jet "minifreighters" that flew into Memphis, Tennessee, every weeknight from all over the country.

Moments later, a small twin-engined jet taxied noisily up to the huge shed housing Federal's distribution center. Painted a brilliant purple, red, and white, the jet rolled to a stop under the arc lights, parallel to a half dozen identical aircraft. Before the pilot had even cut the engines, an electric truck towing a train of small cargo bins emerged from the distribution center and pulled alongside. The jet's cargo door was thrown open, revealing a cabin crammed with small packages. While mechanics checked the jet's exterior and an avionics engineer conversed with the captain, a crew of young men went rapidly to work unloading the little aircraft by hand. The unloading was completed within a matter of minutes, by which time another Falcon had parked alongside and been met by a second crew.

Adam led his visitor back inside the busy distribution building, which contained an 800-foot conveyor system. Packages were being unloaded from one of the trains, deposited on moving conveyor belts, and sorted according to destination cities. There were boxes in a variety of sizes, large metal cans, cardboard tubes, envelopes, and an occasional sturdy package marked with the distinctive black and yellow symbol for radioactive materials.

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"We're carrying 19,000 packages a day now and have stations in 75 cities throughout the U.S.," said the director. "There's tremendous growth potential ahead for Federal Express, but we'll need to focus our efforts more carefully." He leaned over the conveyor belt and plucked up a large purple, red, and white envelope. "This is what we call a Courier Pak," he said. "You can put anything you like in it up to two pounds in weight, and for $12.50 we'll guarantee overnight delivery anywhere in our system. Right now, we're averaging about 1,300 Courier Paks a day but we've never put any real marketing effort behind it. I see no reason why we shouldn't increase that number to at least 6,000 daily."

The Genesis of Federal Express

Federal Express was the brainchild of Frederick W. Smith, Jr., who at age 27 had incorporated the company in 1971. After combat service as a highly decorated U.S. Marine Corps pilot and two years' successful operation of a business buying and selling used jet aircraft, Smith set about putting into practice a new concept for air transportation of packages. He was convinced that there was significant market potential for a small-package air service, flying primarily at night, on routes that met the needs of freight shippers. Most package airfreight at that time flew on commercial passenger flights.

Smith believed that there were major differences between passengers and packages, and the two required totally different treatment. Most passengers were moving between major business centers and wanted the convenience of daytime flights, whereas shippers needed nighttime service to coincide with late afternoon pickups. Additionally, most people flew round trip, whereas any given shipment of goods flew in only one direction.

Consulting firms were retained to study the nature of the market for small-package air service. The resulting reports established that a mere 10% of the airline fleet was flying after 10 P.M. and that over 60% of all airline movements occurred between the 25 largest geographic markets. By contrast, over 80% of small, urgent shipments originated or terminated *outside* the 25 top markets. The reports also found the number of such shipments to be growing rapidly.

Encouraged by the consulting firms' optimistic growth projections for airfreight, Smith subsequently recruited several of the consultants as officers of the new corporation and set about raising almost $90 million in financing. This total included his entire personal worth, $8 million from his family, a $40 million equity capital package from six major corporate investors, plus another $40 million in bank loans. The privately owned Federal Express Corporation (FEC) thus became the largest single venture capital start-up in the history of American business.

The Federal Express Concept

The company flew small jet freighters over a unique route system, similar to the spokes of a wheel. The hub of this system was a sophisticated sorting facility located in Memphis, Tennessee. Memphis was chosen because it was relatively close to the "center of gravity" of package movements within the United States; its airport's excellent weather record also made it a reliable base point.

Aircraft stationed throughout the United States left their home cities every weeknight with a load of packages and flew into Memphis, often making one or two stops en route. At Memphis, all packages were unloaded, sorted by destination cities, and reloaded. The aircraft then returned to their home cities in the early hours of the morning. Packages were picked up and delivered within a 25-mile radius of the airport by FEC couriers. From door-to-door, the package was in Federal Express hands.

To facilitate handling, Federal Express limited packages to 70 pounds, with a maximum length-plus-girth of 108 inches. In its use of the hub system and limited package size, FEC borrowed heavily from the experience of United Parcel Service, a successful surface package carrier. Many of the new firm's operations managers were recruited from UPS.

For its fleet, Federal Express settled on the French-built Dassault Falcon, a twin-engined executive jet which FEC converted to a minifreighter with a cargo carrying capacity of 6,200 pounds. The use of these small aircraft qualified Federal Express as an air-taxi operator and enabled it to avoid restrictive regulation by the Civil Aeronautics Board.

Prior to start-up of package operations in April 1973, the aircraft were used on charter work as they emerged from conversion. Common carrier operations formally began on April 17, 1973. On that night, Federal Express served 22 cities, with 10 aircraft and 150 employees, and carried 15 packages. By October of that year, FEC had 19 Falcons, served 42 cities, and carried 2,500 packages nightly.

Volume increased steadily as additional Falcons were delivered and new cities added, but the company continued to lose money heavily. At one point, Federal Express was technically bankrupt. While top management worked desperately to renegotiate loans, couriers deposited their watches as security when obtaining gas for company trucks, the president sold his personal aircraft, and base personnel hid the Falcons to keep sheriffs from serving attachment papers and chaining the little jets to the ramps. Looking back at the fledgling airline's early difficulties, Smith observed ruefully, "The biggest asset we had going for us was our naiveté. God takes care of fools, you know."

Finally, in mid-1975, Federal Express passed the break-even point. For the fiscal year ended May 31, 1976, the company achieved a net profit of $3.7 million on revenues of $75 million, after paying $65.3 million in operating expenses and $6 million in interest.

In the early summer of 1976, FEC operated 32 Falcons of its own—plus nine other aircraft operated under contract by supplemental carriers—and 500 vans leased from Hertz. It had over 2,000 employees and boasted an average daily volume of close to 19,000 packages. Its flights served 75 cities directly, and pickup and delivery service was provided to 130 cities in the United States. Because of the growth in volume, the company had established a second minihub in Pittsburgh and also operated a shuttle service between Boston, New York, Washington, and intermediate cities. Federal Express had 31,000 customers, of whom about 15,000 used the service in any one month.

The Aircraft Industry

A 1975 study estimated that some 1.5 billion tons of freight were shipped annually in the United States by rail, boat, truck, barge, and air. However, air's share of this total was less than 2%, mainly because airfreight cost a great deal more than surface freight.

Airfreight offered several advantages in addition to speed. Packaging requirements were fewer and damage and loss rates usually lower. Airfreight shippers also had a lower volume of goods in transit or inventory at any one time than when surface transportation was used.

Typical users of airfreight were producers of time-sensitive, high-priced, finished goods going to widespread locations. Bulk products and commodity goods were rarely sent by air. Indeed, most air shipments were rather small; 55% weighed less than 50 pounds while 90% of all shipments were composed of individual pieces weighing less than 70 pounds each.

Since the 1960s, airfreight usage had grown faster than any other segment of freight transportation. Domestic airline freight revenues nearly doubled between 1965 and 1970. By 1975 it was estimated that the airfreight market was producing nearly $1 billion in revenue to the airlines, without including the retail mark-up charged by intermediaries.

Only one-fifth of all airfreight was delivered to airports by the shipper or picked up by the consignee. The bulk of the remaining 80% was accounted for, in roughly equal proportions, by three major intermediaries.

Air Cargo, Inc. was a trucking service, wholly owned by 26 airlines, that performed pickup and delivery service for the airlines' direct customers. The service was provided by 520 contract truckers at 480 of the 522 airports served by the airlines in the United States.

Freight Forwarders were trucking carriers who consolidated cargo going to the airlines. Basically, they purchased wholesale cargo space from the airlines and retailed it in small amounts. Forwarders catered to small shipment customers, providing pickup and delivery services in most cities, either in their own trucks or through contract agents. Whereas it cost the airlines about $10.00 in 1975 to handle a 50-pound shipment on the ground, forwarders' costs were around $6.80. The freight forwarder industry grew at an average rate of 20% annually between 1965 and 1975. There were some 250 firms, with the largest 25 accounting for over 90% of the business. Most forwarders were not profitable and only a few of the top firms consistently earned profits. Emery Air Freight was the largest and most profitable, with 1975 domestic billings totaling $164 million and an operating income of $17.9 million.

The *U.S. Postal Service* (USPS) used air services for transportation of long-distance letter mail and air parcel post. It had recently introduced expedited transportation of letters and packages weighing up to 40 pounds through its Express Mail concept. This offered guaranteed overnight delivery or money back (see *Exhibit 1*). For a 2-pound package, USPS charged a flat rate of $2.25 from post office to post office or $6.25 from post office to addressee.

Because most airfreight was carried in the bellies of passenger aircraft, the operations of these intermediaries were constrained by the airlines, which flew routes and schedules designed to meet the needs of people rather than packages.

Shipping Decisions

Even in the mid-1970s, the purchase of transportation services had yet to receive the same management attention devoted to such company functions as manufacturing, purchasing, engineering, finance, or marketing. It was rare for a traffic executive to rise to top management in any company.

In most organizations, the responsibility for selecting a carrier to handle a specific freight shipment rested with an individual whose title typically was traffic manager, mailroom supervisor, shipping clerk, or dispatcher. Often this person was restricted to use of firms on an approved-carriers list. Sometimes others in the organization insisted upon use of a particular shipping method and even specified the carrier for packages they were sending. Federal Express had found that, for one shipment in four, it was the consignee who specified that FEC service be used.

Competitive Activity

Competition in the aircraft business was intense. It was believed that there were close to 1,000 airfreight forwarder salespeople across the country, to which could be added the representatives of expeditors, couriers, messenger services, REA Air Express, UPS Blue Label service, and the airlines themselves. Every *Yellow Pages*[1] in the larger cities had extensive listings under "Air Cargo Service," (Manhattan had 240 entries), "Delivery Service," or "Messenger Service." *Exhibit* 2 shows extracts from the 1976 Boston area *Yellow Pages* in these three categories.

In general, the industry lacked marketing expertise, and companies relied heavily on personal selling efforts. Brochures, sales materials, rate sheets, and routing guides were used to support the salesforce. Direct mail was often used to generate sales leads. Only the biggest carriers, such as Emery, Shulman, and REA Air Express, advertised regularly on a large scale. One reason for the limited use of advertising was that most airfreight forwarders had few competitive advantages to offer. Emery Air Freight, by contrast, had spent millions on development of a systemwide computer tracing capability called EMCON and had promoted this in its advertising.

Air Transport World characterized the airfreight industry as "an aggressive, even seamy business." A 1974 marketing study prepared for Federal Express by a consulting firm commented: "The techniques of selling air freight services vary from strictly ethical to outright bribery. Techniques vary from discrediting the competition to kickbacks and payoffs. . . . [Name deleted] supports a penthouse and a yacht in New York City."

Some of the forwarding firms focused their attention on shipping for particular industries. Alternatively, salespeople within a given airfreight organization might elect to follow a strategy of industry specialization in their choice of customers and prospects.

The Small Package Market

The market for domestic transportation of small packages could be divided into four groups, categorized by order of speed desired.

Emergency service received maximum speed and was the most costly. This category catered to panic shippers and was not price sensitive. It included courier services, airline baggage services, specialized expeditors, and aircraft charter. Companies active in this field included Purolator Courier Corporation, Shulman Sky Cab, Delta Dash (a service of Delta Airlines), and other airlines, some air taxis, and many expeditors. This category was generally known as "same day service" (see *Exhibits 2, 3,* and *4*).

Rush service could be described as "fast, within certain limits," was only somewhat price sensitive, and generally involved next-day delivery. Competition included many airfreight forwarders, REA Air Express, some airlines, and Express Mail (see *Exhibits 1* and *2*).

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[1] The *Yellow Pages* is a directory of suppliers of goods and services, organized by product category and published in each city by the local telephone company.

Routine Air was the largest airfreight category. Price competitive, it was often referred to in the trade as "2 + 1" (want it there in two days but can live with three). Competition included Air Parcel Post, UPS Blue Label service, and some airfreight forwarders.

The *Routine* category included all other freight services and involved mostly surface transportation. This segment was by far the largest of the market and highly price sensitive. Major carriers were the U.S. Postal Service (fourth-class parcel post) and United Parcel Service.

The estimated size of the three air markets in 1974 was:

Market	*No. of Shipments (mil.)*	*Avg. per Shipment*	*Total Volume (mil.)*
Emergency	2.5	$30	$ 75
Rush	15.5	10	155
Routine Air	122.3	4	490

All three markets were growing rapidly, together averaging an estimated 20% increase each year. The higher priority services were believed to be growing at an even faster rate.

Federal Express Service

The majority of FEC's shipments were for next-day delivery. *Priority One* provided overnight service for packages, with deliveries before noon of the next business day. Special handling, at extra charge, was available for hazardous materials or for *Signature Security*. The latter was designed to provide continuous responsibility for the custody of high-security packages. Another overnight delivery service was *Courier Pak*, which provided transportation of items weighing up to two pounds in special, 12-inch by 15½-inch, waterproof, tearproof envelopes. On average, the contents of a Courier Pak weighed about one pound. Courier Paks could be shipped individually or in a container holding about 30 each.

For shippers who were less rushed, Federal Express offered its less expensive *Standard Air Service*, with deliveries guaranteed on the second business day after pickup. An even lower priority service, *Economy Air*, which offered third-day delivery, had been discontinued in January 1975 when it was found to be losing money.

Rates for Priority One and Standard Air Service were based on weight and distance traveled, with discounts being granted on a sliding scale for consignment of multiple shipments on a single day. Various restrictions discouraged shipment of large packages with a high volume to weight ratio, because the carrying capacity of the Falcons usually cubed out (i.e., filled the aircraft interior) before it grossed out (i.e., reached the maximum loaded weight allowable). The average package weighed about 14 pounds and a rough rule of thumb at FEC was that 10 pounds of cargo took up about one cubic foot of space. A $2.50 surcharge per package was applied to Hazardous Material shipments, and a $5.00 surcharge to Signature Security items. Courier Pak envelopes cost $12.50 for shipment anywhere in the FEC system and had to be purchased in advance in quantities of five or more at a time.

Marketing at Federal Express

Sales and other marketing activities had separate organizational structures at FEC. Contact with customers and prospects was typically made by three groups of employees: sales representatives, termed customer service representatives or senior account managers; couriers; and customer service agents.

Customer service agents, couriers, and customer service representatives reported to their local station manager, who was part of the operations chain-of-command. Senior account managers, by contrast, reported through regional sales managers to the vice president–sales. Managers responsible for such areas as market research, marketing administration, and advertising were located in Memphis and reported to the senior vice president–marketing, who had no line authority over the sales function.

Early Marketing Efforts

At the outset, in early 1973, FEC's main problem was finding shippers willing to use its services. Recalled one senior executive:

> We initially served 22 cities. So, we had to go to a shipper who had never heard of us and who had been inundated by fly-by-night operations promising the moon and gone the next day. The shipper is very careful about changing. He's learned the

> hard way. We came in and said we were flying our own planes and could take certain-sized packages of certain weight going to certain cities. About halfway through our presentation, eyes would start rolling and skepticism became pretty evident. It took a long time to break into major accounts.

Several blitz teams of four or five salespeople canvassed different cities prior to FEC's start-up, working two to three weeks in each city to presell the company's service. Selling activity continued after start-up, while blitz efforts were extended to other areas as the system expanded. Advertising was limited to an opening announcement in local newspapers and by direct mail.

New business was initially hard to obtain, although an early commitment from the Department of Defense and other U.S. government agencies provided needed volume, as well as credibility.

The first attempt to develop a systematic marketing plan for Federal Express was made in early 1974. A study by the Aerospace Advance Planning Group (AAPG), a New York consulting firm, highlighted the problems generated by the intense pressure to put FEC on a "pay-as-you-go" basis. These problems, as reported by the consultants, included "reactionary, short-term planning," "failure to follow through on previous programs," and "loss of strategic thinking." In short, AAPG said, the company was crisis oriented. A major weakness was that available data, while prolific, emphasized operating performance and provided little information on the market, the competition, or the local areas served. Sales incentives emphasized "getting more packages," without regard to profitability.

The resulting recommendations included a change in rate structure, with an increase in most rates;[2] improved coverage of areas served; better account maintenance to ensure that existing customers continued to use Federal Express; more productive use of the sales force; reorganization and expansion of the marketing department; and stronger efforts in advertising and public relations.

Within a month of receiving this report, FEC had hired the principal consultant on the project, J. Vincent Fagan, as senior vice president–marketing. Fagan had been working with AAPG for six years. Prior to that, he had worked with PanAm on its program for marketing the Dassault Falcon in the United States, and with the McCann–Erickson advertising agency in New York.

Advertising

Fagan determined that an aggressive advertising policy was necessary. Focus group interviews[3] with shipping managers had shown them to be somewhat timid individuals. For the most part neither well educated nor particularly ambitious, their basic job strategy seemed to be one of avoiding problems with their supervisors. One way was to use a reliable, well-regarded carrier such as Emery Air Freight, which enjoyed very high awareness. In Vince Fagan's words, "They could use Emery forever and never be criticized."

The New York firm of Carl Ally, Inc., was selected in October 1974 as the company's advertising agency, since it had a reputation of being a "bomb thrower" in the advertising business. Their first advertising for FEC, in early 1975, used both press and TV, and was a four- to five-week introductory campaign designed to stimulate awareness.

In April 1975, FEC commissioned the Opinion Research Corporation to conduct an impartial test of relative delivery speeds and costs for FEC, Emery, Airborne, and REA Air Express. This study involved rotating test shipments among a variety of different city pairs and different days of the week. The results showed that 93% of Federal Express Priority One packages arrived the next day, versus only 42% for Emery and even lower percentages for the other two. These results were used as the basis for a new TV and print advertising campaign (see *Exhibit* 5) initiated during the second half of 1975 and rolled out on a market-by-market basis. This attack positioned FEC firmly against Emery.

Fagan was able to measure the impact of the advertising by running it only in selected cities and then comparing changes in package volume in these test cities with those in the remainder of the FEC system. One flight of advertising was run in the New York and Los Angeles areas between late June and the beginning of September 1975. The average daily package count in these two areas in mid-March 1976 was 89% over the April–May 1975 base, versus 48% for the rest of the system. A second flight of advertising appeared between early October and mid-November 1975 in Detroit, Cleveland, Philadelphia, and Dallas. The average daily count in these cities in mid-March 1976 was 46% higher than the August–September 1975 base, versus 34% for the rest of the system.

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[2] The price of a Courier Pak was increased by 70%, from $5 to $8.50 as of September 6, 1974.

[3] Focus group interviews involve groups of perhaps five to eight subjects, led by a trained interviewer who directs a discussion on specific topics.

One of the advantages of advertising, Fagan believed, was that the company maintained complete control, whereas attempting to communicate through couriers or the sales force was subject to the human element.

Marketing Staffing

Other marketing activities, in addition to advertising and pricing, for which Fagan was responsible included market research and strategic planning. A determined effort had been made to develop a good source of information for planning and decision making, using data generated both within and outside the company. The company's director of market research oversaw data collection and analysis.

In March 1976, Fagan had established a new position of director of marketing administration. To fill this spot he had recruited Heinz J. Adam, a marketing executive with the American Can Company in New York. Adam evaluated FEC's various services, with a view to developing strategies for future growth. Working with other staff members, he had begun an in-depth analysis of the market potential for hazardous materials shipments and for Courier Pak.

Another recent appointment was that of Teri Romines as FEC's first director of advertising. Romines had previously worked in advertising with a large retailing firm. One of her functions was to act as liaison between the 75 Federal Express stations, the head office, and the advertising agency, informing the company's employees about the objectives, scheduling, and content of advertising, so that field offices might coordinate their own promotional and sales activities accordingly. She found this strategy was well received and greatly improved the flow of feedback and ideas to the head office.

Personal Contact with Customers

In the summer of 1976, FEC had some 35 senior account managers (SAMs) and 75 customer service representatives (CSRs). Federal Express recruited about 50% of the SAMs from sales positions with airfreight forwarders, and promoted 10% from among its own CSRs; the remaining 40% had other sales experience. By contrast, four-fifths of the CSRs were recruited from the ranks of the company's couriers and customer service agents.

Craig Bell, vice president–sales, saw the task of CSRs more as account maintenance than as selling. They should, he said, be able to generate new leads and to assist station operations with such activities as following up on missing or damaged packages, checking on billing problems and procedures, and ensuring that delivery and pickup schedules were satisfactory for the customer. These tasks were more appropriately included under operations than sales, he believed. On average, CSRs made 8 to 10 calls daily, by phone and in person, and were paid $11,000–$13,000 a year, plus bonus. The total annual cost of maintaining a CSR in the field, including salary, expenses, and overheads, averaged about $18,000.

Bell saw the role of the SAMs as more sophisticated. Identifying the decision maker in a large firm was often a difficult task. Clarifying what had to be done to win the business (or a greater share of an existing customer's business) might require skillful probing and analysis. The task could involve, among other things, working with shippers to determine their long-term needs and providing advice in such areas as packaging and logistics.

The SAMs typically earned a base salary of $15,500–$22,000. Bonuses added an average of 10% to this base and were calculated on the individual's performance in three areas—improving volume on present accounts, generating new business, and accurately forecasting account volumes. Bell placed a lot of emphasis on forecasting ability: "Once an individual is able to forecast his business accurately, that tells you that he understands his customers and their business. Once he knows about his basic accounts, then he knows the questions that should be asked." The total annual cost of maintaining a SAM in the field averaged $31,000. Typically, a SAM was expected to make five to eight customer calls daily.

Local Operations and Sales

A sense of what took place at the end of one of the spokes extending from FEC's Memphis hub could be obtained from a visit to the Boston station which, for its size, was representative of FEC station operations.

Federal Express operations in the greater Boston area were based at Hanscom Field in Bedford, about 15 miles west of downtown Boston. Federal leased half a large hangar for light maintenance and package sorting operations; adjoining offices housed the station manager, Denis Spina, the sales staff, and a radio-dispatch facility.

One senior FEC executive described the job of station manager as "the key to company operations." These individuals, he said, had profit and loss responsibility for what might be as much as a $5 million business in large stations. They had to watch costs carefully, supervising performance in both the station office and the field.

Each weekday morning, a Federal Express Falcon flew in from Memphis, scheduled to arrive at 7:30 A.M. Two supplemental carriers, operating under contract to FEC, flew in packages from the recently established Pittsburgh minihub and from several East Coast cities.

At 7:25 one summer morning, a crew of Federal Express couriers could be seen busily unloading the Pittsburgh supplemental flight, a white Hansa Jet. This task was almost complete when at 7:40 the second supplemental, an old-fashioned, propeller-driven Twin Beech, arrived at the end of its milk run from Washington, via Baltimore, Philadelphia, and Newark. There was still no sign of the Memphis flight and a check over the teletype established that it had been delayed half an hour leaving its home base. Spina indicated that such a delay occurred about once every three weeks. Finally, at 7:55 the purple Falcon touched down and taxied quickly over to be unloaded.

In the hangar, two lines of vans, all painted in FEC colors, had been backed up against a line of rollers. As the packages trundled along the rollers, each courier picked out those destined for consignees on his or her route and positioned them carefully inside a vehicle. About 7% of packages were marked "Hold at Airport," for individual collection by the consignee.

The station manager noted that there was an imbalance between outbound and inbound loads in the Boston area. A check of the previous day's totals yielded the following typical figures:

	Priority One	*Standard Air*	*Courier Pak*	*Total*
Outbound	911	227	39	1,177
Inbound	539	133	22	694

However, the couriers had actually made more delivery stops (363) than pickup stops (326). The daily report indicated that 151 of these pickup stops were regular daily visits to frequent shippers, while the remaining 175 had been scheduled in response to telephone call-ins by customers. About 12% of outbound packages were brought directly to the airport by the shipper.

Because of the imbalance in loads, there were four flights out of Hanscom Field in the evening, which required routing a second FEC Falcon into Boston at night. Flights left for Memphis at 6:30 and 10:00 P.M., for Pittsburgh at 10:30 P.M., and for the East Coast milk run at 10:55 P.M.

A Morning with a Courier

Working fast, the couriers had loaded all the vans by 8:35 A.M. and had made up some of the time lost by the late arrival of the Memphis flight. Ken Barlow, a cheerful man in his early 30s, jumped into the driver's seat of his van and within minutes pulled out of the main gate of Hanscom Field onto the road to Lexington. His regular route covered five suburban towns near Boston; he made a delivery run in the morning, a pickup run in the afternoon, and usually finished work around 6:30 P.M.

Ken's first stop, at 8:45, was to deliver a small package at the surburban plant of a large chemical company. It was signed for by the head shipper at the plant's loading dock. As the courier got back in the van, his radio crackled, asking his estimated time of arrival at a particular address.

Five minutes later he was pulling into the receiving dock of a well-known office machinery firm, where he delivered two boxes and a Courier Pak to the receiving dock. At 9:02, another radio call came through.

"Do you have a package for Raytheon there?"
"Yeah, I've got it, Jean. Should be in Waltham around 11:30."

There was a pause, then,

"What's your next stop?"
"I'm on the way to Xerox, then Hewlett-Packard in 20 minutes."
"He'll meet you there."

At 9:05 Ken stopped at the Xerox plant, delivered a package downstairs at the receiving office and a Courier Pak to the receptionist in the office upstairs. As Ken left the parking lot a green car met the van and the driver waved Ken to a stop. It was the man from Raytheon who signed quickly for a small package which, he explained, was a product part long overdue from the suppliers.

The morning continued with stops every few minutes, typically at new suburban plants and office buildings. Most deliveries consisted of one or two small packages. Two of the larger boxes in the van, both relatively light, were delivered to a major computer firm and bore labels showing that they had been dispatched from the same company's plants in Pennsylvania and California.

Ken exchanged a cheery word or two with many of the shipping clerks, traffic managers, and receptionists who signed for his packages, but he never dallied at any location. At one plant, the traffic office was empty. "The receiver here's an oldtimer—he's never around," muttered Ken, looking quickly for somebody else to accept delivery. By 11:00 he was driving through a rundown, industrial area of Watertown and was expressing concern that he might not be able to complete all his deliveries before noon. He was annoyed that his route that morning included two deliveries in Arlington, a slow 20 minutes away. For the first time, he had to use his handcart to transport several bulky parcels from the van. At another stop, he dropped off 10 new Courier Paks, which a firm needed for forthcoming shipments of engineering prints.

It was past noon before the courier arrived in Arlington for his last two shipments. At 12:15 he delivered a package to a Datsun dealer and five minutes later a box marked "laboratory specimens" to a doctor's office, but neither showed any awareness that the delivery had been made after the 12 o'clock standard. Heaving a sigh of relief, Ken walked across the street to a small restaurant and bought a large submarine sandwich and a soft drink. He had driven about 30 miles, made 37 stops, and delivered some 60 packages, including three Courier Paks.

An Afternoon with a Salesperson

John Griffin had been with FEC since June 1973. Then an undergraduate at Boston University, he had taken time out from school to earn extra money by working as a courier for the fledgling Boston operation. Persuaded to stay on, he had been promoted to Lead Courier and was made responsible for assigning the areas to be covered by individual couriers. Next came a year and a half as night operations supervisor. In 1975, he had accepted a position as a CSR, feeling that the long-term opportunities outweighed the immediate, sharp drop in salary. His optimism appeared justified by a promotion to SAM 11 months later.

Griffin explained that he was in a transition between his old and new job. His future assignment would be to focus on 70 key accounts in the Boston/Worcester area. Presently, he had 101 accounts in the Boston area alone and would be transferring the smaller ones to other CSRs. Although he described Federal Express as an easy product to sell, he believed that more effort was needed to develop the market. In particular, he felt that CSRs should report to SAMs rather than to station managers. It was difficult, he said, to get support for a better CSR program, improved secretarial assistance, and more information on who was shipping what to whom.

Griffin's first call after an early lunch was to the corporate headquarters of a large retailing firm, located just outside Boston. The previous week, he and the regional sales manager had made an hour and a half presentation to the firm's traffic manager and three traffic supervisors. Their interest in Federal Express lay in obtaining rapid transportation of small rush orders—"where we needed delivery yesterday"—from vendors and the firm's own warehouses to its numerous stores. Among the concerns raised at this first meeting was that some vendors and stores were located more than 25 miles from a Federal Express station, and hence outside the normal pickup and delivery area. What extra charges, they asked, would be incurred for use of a supplementary carrier to serve these out-of-area locations?

Griffin parked his car, entered the attractive modern building, and gave his name to the receptionist. A secretary came out and led him to the traffic manager's office where a well-dressed man in his late thirties shook hands and waved him to a seat. The salesman had researched store and vendor locations and was able to identify for his prospective client which stores and vendors were located out-of-area. For the next hour they discussed the costs and logistics of servicing these locations and how to resolve the stores' preference for paying c.o.d. rather than being billed separately. Griffin said that he would raise the c.o.d. issue with FEC's accounting office. The meeting concluded with the traffic manager's request for a complete proposal within a month.

From the suburbs, John Griffin drove into Boston for his next appointment. A traffic manager had called the Federal Express office asking that a salesman visit; since Griffin already had a later appointment in the immediate area with an existing client, he had agreed to take this call.

The address turned out to be a gloomy warehouse building, with boxes of all sizes stacked in tall racks. The prospect's office was in a small, green, hut-like structure built out from one of the walls. A middle-aged man, tieless and in shirtsleeves, could be seen through the cracked glass door working at a cluttered desk. Spotting the salesman, he waved him in. Griffin introduced himself. For a moment the man at the desk looked puzzled, then his face cleared. "Oh, yeah," he said. "You're the people with the purple planes. Tell me all you know, kid!"

Griffin began by asking about the company's business, what its products were, where they were shipped, how important delivery times were, and to what extent airfreight was presently employed.

Shipments went in spurts, the manager indicated in response. They used several airfreight firms, most shipments went to Texas and the Midwest, and second-day delivery was usually sufficient. As he spoke, he was sorting waybills into piles on his desk, pausing only to flick ash from his cigarette onto the worn linoleum floor.

"How much do you know about Federal Express?" asked the salesman.

"I watched you on the TV versus Emery."

The traffic manager raised his hands, palms down, one a foot above his desk and the other high above his head. Griffin remembered the TV commercial (similar in content to *Exhibit* 5), which had last run in Boston some four months before.

"Is that how you found out about us?"

"Yeah."

The manager went back to his sorting while the salesman briefly described the Federal Express operation and how it worked, outlining the procedures for calling a courier, billing arrangements, and FEC size limitations. The latter would evidently be restrictive, because many of the shipper's packages exceeded Federal's maximum limit, but the traffic manager just shrugged and stubbed out his cigarette in a dirty saucer. When the salesman offered to have a courier call that afternoon, the traffic manager said that he didn't need anything today, thanks, but he'd be calling.

John Griffin shook hands and saw himself out. "That was a rum one," he murmured to himself as he walked out onto the street again. "But I think we'll be seeing some business from him."

His 3:15 appointment was with the operations manager of a medical firm that ran a number of specialist treatment centers around the country. The corporate offices in Boston were responsible for most of the financial work; management apparently placed great importance on shipping financial and statistical reports quickly to local treatment centers for immediate review. The firm had been using Federal Express since 1974 for shipping boxes of reports; it had tried several airfreight forwarders and settled on Federal as providing the best service. In late 1975, finding Special Delivery mail increasingly unreliable after cutbacks in airline schedules, the firm began using Courier Paks for shorter reports. They currently sent 50 Courier Paks and 30 packages each month.

Griffin made a point of calling on this account once every two or three months, following up any problems, and explaining any changes in Federal Express service or prices. On this occasion, he brought a supply of new Courier Paks with him. The operations manager was a woman in her thirties, whose office was a large, windowless room piled with stacks of boxes, documents, and computer printouts. She and the salesman spent about 20 minutes discussing the implications of her firm's planned move to the new John Hancock Tower in central Boston. Griffin mentioned that Federal Express was thinking of installing a drop-box for Courier Paks on the ground floor of the new building, so that the courier could make a late afternoon collection after the offices had closed.

Leaving the building at 3:40, the salesman sought out a pay phone and called his office to check if there were any messages. A prospective customer, located about 10 minutes away, had phoned asking for a presentation, he was told. Griffin obtained the name, address, and phone number, called the prospect, and set up an appointment for four o'clock.

The new prospect was the director of office services for an advertising agency. The decor of the office was arty, modern, and expensive, with several prize-winning advertisements in frames on the walls. The director, a smartly dressed woman in her fifties, shook hands and thanked the SAM for responding to her enquiry so promptly. She paid all the agency's bills, she said, and used airfreight for shipping items like films and artwork, research materials, and even office stationery. Recently, she had noticed that the research department had been receiving packages shipped by Federal Express and returning materials to their clients via this carrier. Her interest had been stimulated by Federal's recent TV advertising—"I know you have your own planes," she remarked.

Griffin explained the nature of FEC service and emphasized the importance of having one's own aircraft. He then showed her a Courier Pak and fielded several questions about billing and insurance. Upon being told that the agency frequently shipped film insured for $5,000, he explained that the maximum insurance on Courier Pak was currently only $200 but that arrangements for higher coverage could be made with Priority One. When the director mentioned that Delta Dash charged $26.50 for express document handling between Boston and New York, he told her that using Courier Pak would save her $14.00. She appeared impressed.

The interview concluded with the salesman's leaving a booklet containing information on rates and billing, as well as a supply of airbills (combined bill and shipping order), and explaining procedures for completing the latter. He also sold the director five Courier Paks. Descending in the elevator, John Griffin checked his watch. It was 4:40. With luck, he'd be onto the turnpike and heading back to his office before the traffic built up.

The Situation in June 1976

In the early summer of 1976 FEC management looked ahead to continued growth. With the average flight carrying 4,900 pounds of freight and loaded to 85% of volume capacity, the company was seeking legislation in Congress to allow it to operate larger aircraft. However, it was recognized that this change might take a long time to achieve.

A January 1976 survey showed that awareness of FEC among prime prospects (i.e., airfreight shippers not presently using FEC) had increased significantly, with FEC ranking third out of 10 airfreight companies. Among these prospects, 75% recalled the Federal Express name on prompting. However, among these prospects, prompted awareness of Emery was close to universal and for Airborne it was 85%. Unprompted recall figures were: Emery, 61%; Airborne, 22%; and FEC, 12%.

These figures were important to Heinz Adam, who had been with Federal Express just three months. While still adjusting to the move to Memphis after living some 20 years in New Jersey and working in New York City, he was enthusiastic about his new position. He described it as demanding but very stimulating. "It's the first time I've really had fun in a job!" he remarked.

Adam termed Federal Express "a very people-oriented organization: people are what make things work here; the loyalty of its employees has been very important to the company." In addition to high wages and good benefits, FEC also operated a profit-sharing plan for employees. A recent attempt by the Teamsters to unionize FEC employees was voted down by a four-to-one margin. On the other hand, Adam did not see Federal Express as a customer-oriented business. "It's operations-oriented," he said, "and as a marketing man this drives me up the wall sometimes."

As he reviewed the company's performance since the beginning of 1975, Heinz Adam became increasingly convinced that Courier Pak had great, but unfilled, potential. Sales had almost doubled in the past year (see *Exhibit 6*), but still represented less than 10% of total overnight package volume for FEC and barely 5% of overnight dollar volume. Studies by the cost accounting department showed that the average Priority One package generated a 55% contribution margin on an average price of $23.56, while Standard Air yielded a 27% contribution on an average unit price of $12.62. Courier Paks, priced at $12.50 each since March 1976, yielded a 66% contribution margin.

An analysis of Courier Pak usage by customer type produced the profile shown in *Exhibit 7*. A spring 1976 survey of Priority One and Courier Pak usage by FEC's top 1,400 customers found that 24% used both products, less than 1% used only Courier Pak, while the rest used only Priority One. The key attribute separating Courier Pak from Priority One service in the customer's mind was the expectation that the former would be delivered to the addressee and not just to the receiving dock. Another analysis showed that 57% of Courier Pak volume came from the 14 top FEC stations and 20% from the top 3; the same analysis figures for Priority One were 44% and 15% respectively.[4] On average, users sent 0.45 Courier Paks per day.

A review of the market size for "emergency," "rush," or "special handling" delivery of documents or other small items suggested that the market was almost 870,000 pieces per day (see *Exhibit 8*). Heinz Adam discussed the situation with Vince Fagan; the two men concluded that a target of 6,000 Courier Paks per day within six months would not be unrealistic, although it represented a 350% increase over current levels.

A Marketing Plan for Courier Pak

The next task Adam faced was to develop an appropriate marketing strategy for Courier Pak. In particular, there was a question as to what type and level of advertising and selling effort to put behind this service.

The company's advertising plan for 1976–1977 included TV commercials promoting Federal's overall competitive advantages (see *Exhibit 9*). The planned press and magazine advertising included two different full-page advertisements for use in *Business Week*, *U.S. News & World Report*, *Time*, *Newsweek*, and the *Wall Street Journal*, as well as various trade publications. One of these ads mentioned Courier Pak in the text and showed a small picture of it (see *Exhibit 10*). The only attempt already planned to promote Courier Pak specifically was an advertisement on the cover of FEC's upcoming July/August routes and tariffs brochure (see *Exhibit 11*). Would this suffice, Adam wondered, or should a more aggressive policy be adopted, involving advertising, sales activity, and other promotions? One possibility was to install a nationwide "Hotline" for Courier Pak information, using an "800" area code telephone number, which would be free to callers. Estimated monthly costs, including WATS rental at $1,670, employee wages, and other costs, were $2,770.

To help evaluate alternatives, Adam's assistant had collected data on advertising rates for a number of periodicals (see *Exhibit 12*), and for leading daily newspapers and TV stations in certain large cities (see *Exhibit 13*).

Although Federal Express management was pleased with the company's progress, they knew that the competitive climate had toughened. The better carriers had improved their service and were becoming more aggressive, while Express Mail was believed to be doing well. A few days earlier, Adam had opened his *Wall Street Journal* to a double-page advertisement for Emery Air Freight promoting that company's size and resources. He would have to take this overall situation into account in deciding how to proceed on Courier Pak.

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[4] In rank order, the 14 largest airfreight markets in the United States were: New York, Los Angeles, Chicago, San Francisco, Boston, Philadelphia, Detroit, Atlanta, Dallas, Milwaukee, Minneapolis, Cleveland, Houston, and Miami.

Exhibit 1
Extract from U.S. Postal Service Brochure on Express Mail, "Here Today . . . There Tomorrow"

You can send almost anything by Express Mail.

Anything that's mailable up to 40 pounds—letters, reports, magnetic tapes, merchandise, you name it. And insurance coverage is included at no extra cost. What's more, you can combine letters and merchandise in the same package. For example, you could include regular letters, or data processing runs in the same carton with spare parts, or other merchandise. The Express Mail cost for the entire carton would be the normal weight-and-distance charge with no extra charge for the letters.

Guaranteed overnight delivery.

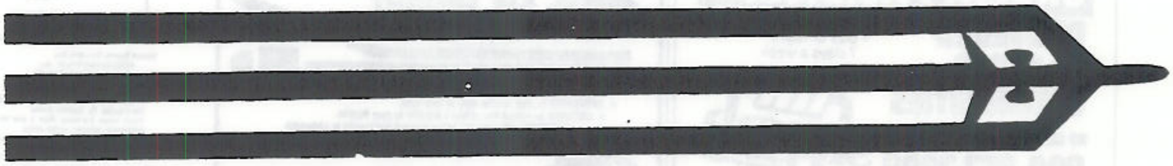
We will deliver it by 3 P.M. *next day* or, if you prefer, your shipment can be picked up as early as 10 A.M. We will get it there or you get your money back.

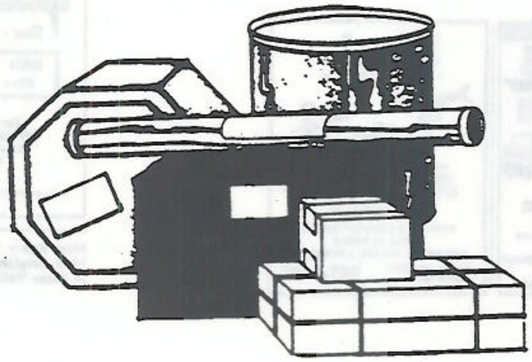
It's so easy to use Express Mail.

Just bring your shipment to any Postal facility with an Express Mail window by 5 P.M. Check the enclosed insert for the location nearest you.

You'll get a special Express Mail address label at the window, so there's no need to make out your own shipping label.

You get a receipt for each shipment and a record of delivery is kept at the destination Post Office, if you ever need confirmation.

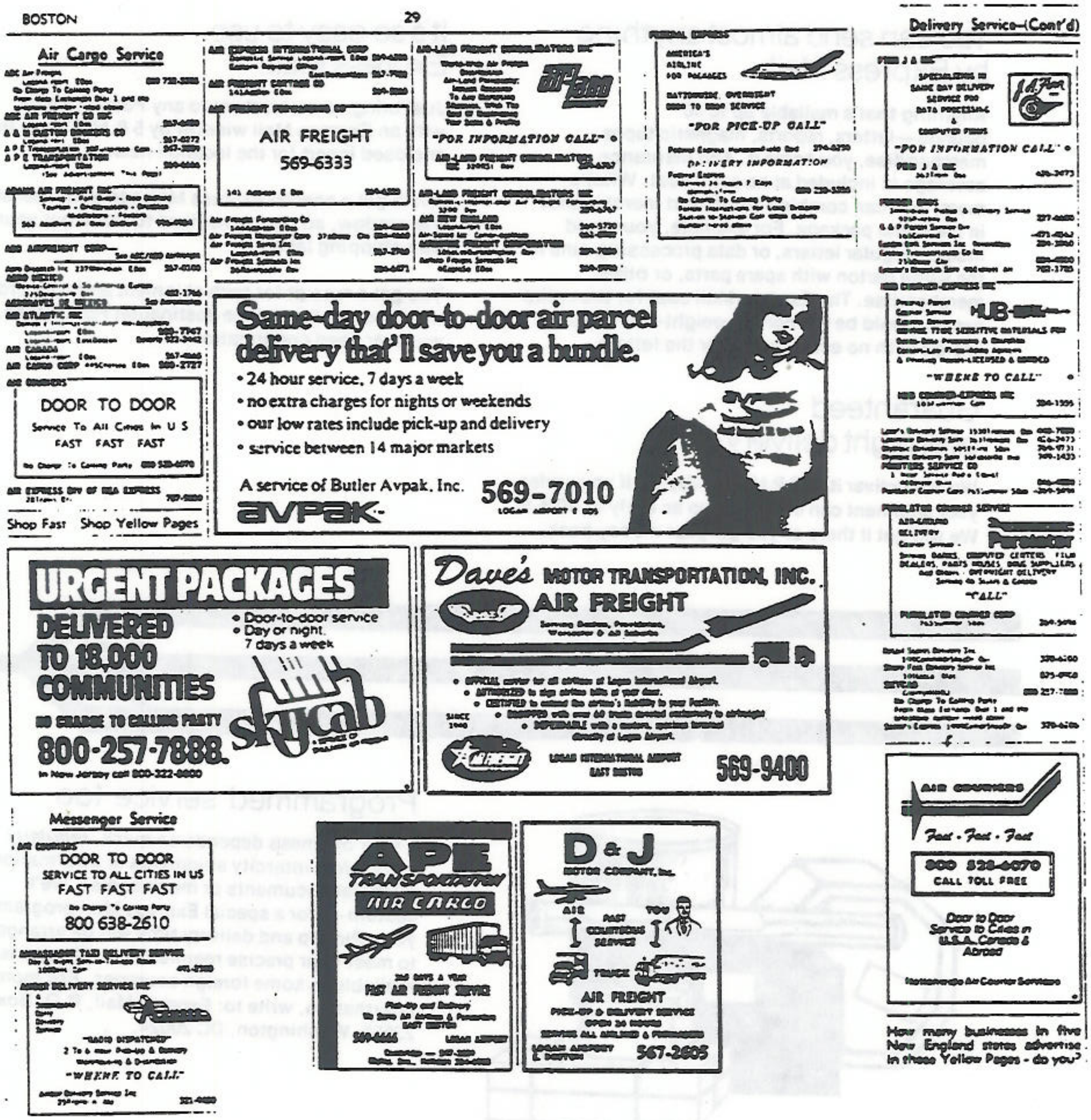




Programmed service too

If your business depends on quick, *regularly scheduled* intercity shipments of information, financial documents or merchandise, we'll *custom-tailor* a special Express Mail program for you. Pickup and delivery time will be arranged to meet your precise requirements. Service is also available to some foreign countries. For more information, write to: Express Mail, P.O. Box 23555, Washington, DC 20024.

Exhibit 2
Selected Listings from 1976 Boston *Yellow Pages* for Three Categories—"Air Cargo Service," "Delivery Service," and "Messenger Service"



BOSTON

29

Delivery Service–(Cont'd)

Air Cargo Service

AIR FREIGHT
569-6333

DOOR TO DOOR
Service To All Cities In U S
FAST FAST FAST

Shop Fast Shop Yellow Pages

"FOR INFORMATION CALL"

AMERICA'S
AIRLINE
FOR PACKAGES

"FOR PICK-UP CALL"

DELIVERY INFORMATION

"FOR INFORMATION CALL"

"WHERE TO CALL"

Same-day door-to-door air parcel delivery that'll save you a bundle.

- 24 hour service, 7 days a week
- no extra charges for nights or weekends
- our low rates include pick-up and delivery
- service between 14 major markets

A service of Butler Avpak, Inc. 569-7010

avpak

URGENT PACKAGES
DELIVERED
TO 18,000
COMMUNITIES
NO CHARGE TO CALLING PARTY
800-257-7888.

- Door-to-door service
- Day or night
7 days a week

skycab

Dave's MOTOR TRANSPORTATION, INC.
AIR FREIGHT

LOGAN INTERNATIONAL AIRPORT
EAST BOSTON
569-9400

"CALL"

Air Couriers
Fast · Fast · Fast
800 528-6070
CALL TOLL FREE
Door to Door
Service to Cities in
U.S.A. Canada &
Abroad

How many businesses in five New England states advertise in these Yellow Pages - do you?

Messenger Service

DOOR TO DOOR
SERVICE TO ALL CITIES IN US
FAST FAST FAST
800 638-2610

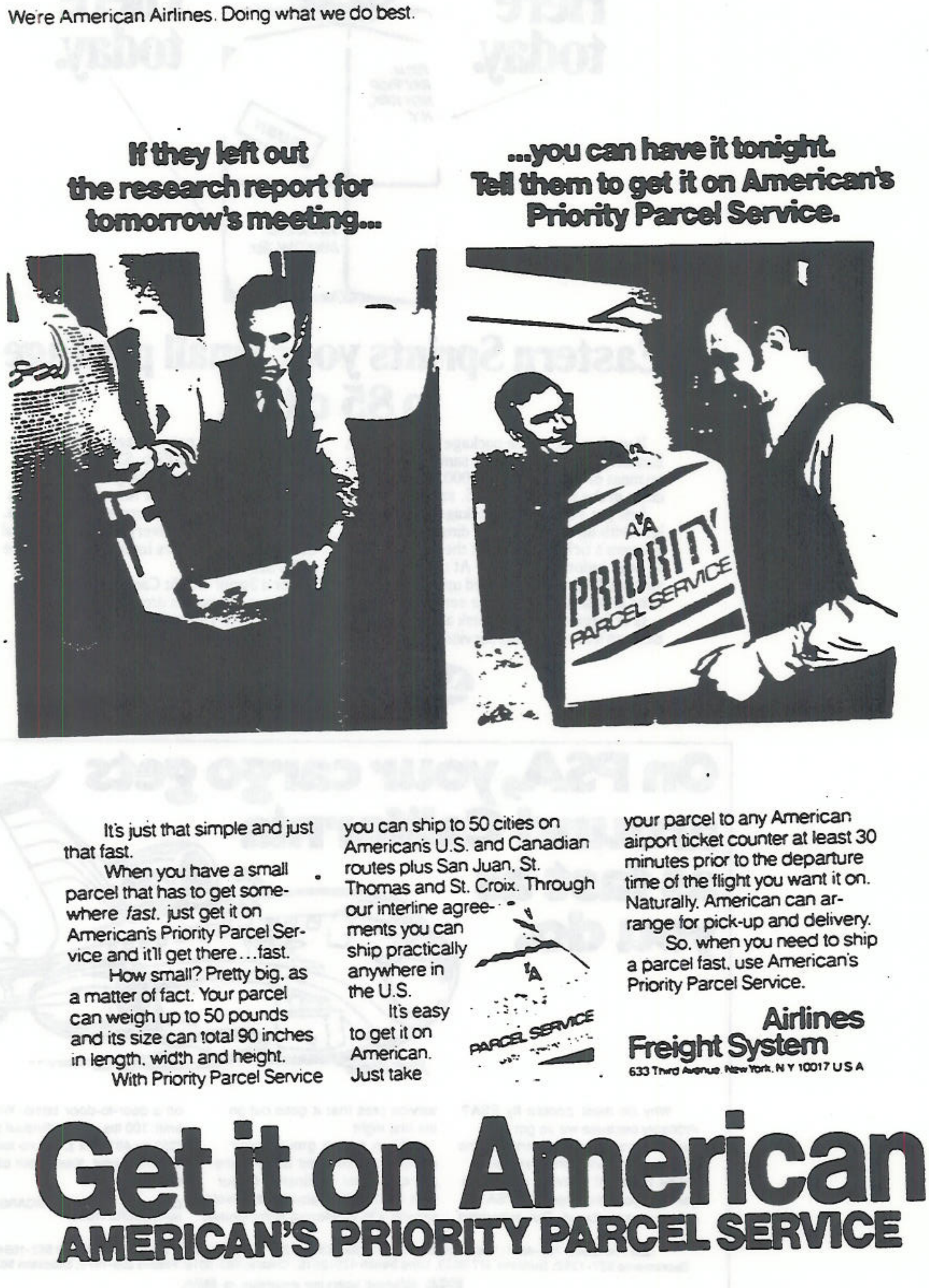
"WHERE TO CALL"

APE
TRANSPORTATION
AIR CARGO

D & J
MOTOR COMPANY, Inc.
AIR
FAST
COURTEOUS
SERVICE
YOU
TRUCK
AIR FREIGHT
567-2605

Source: 1976 Boston *Yellow Pages*; listings are reproduced by permission.
Note: Many firms were listed in two or three of these categories. In 1976–1977, Federal Express would be listed under "Air Cargo" in 575 yellow page directories throughout the United States, at a total cost of $80,000. The format of its listings would be similar to, or smaller than, that shown in column 4 above.

Exhibit 3
American Airlines Priority Parcel Service Advertising


AA
PRIORITY
PARCEL SERVICE
AA
PARCEL SERVICE

We're American Airlines. Doing what we do best.

If they left out the research report for tomorrow's meeting...

...you can have it tonight. Tell them to get it on American's Priority Parcel Service.

It's just that simple and just that fast.

When you have a small parcel that has to get somewhere *fast,* just get it on American's Priority Parcel Service and it'll get there...fast.

How small? Pretty big, as a matter of fact. Your parcel can weigh up to 50 pounds and its size can total 90 inches in length, width and height.

With Priority Parcel Service you can ship to 50 cities on American's U.S. and Canadian routes plus San Juan, St. Thomas and St. Croix. Through our interline agreements you can ship practically anywhere in the U.S.

It's easy to get it on American. Just take your parcel to any American airport ticket counter at least 30 minutes prior to the departure time of the flight you want it on. Naturally, American can arrange for pick-up and delivery.

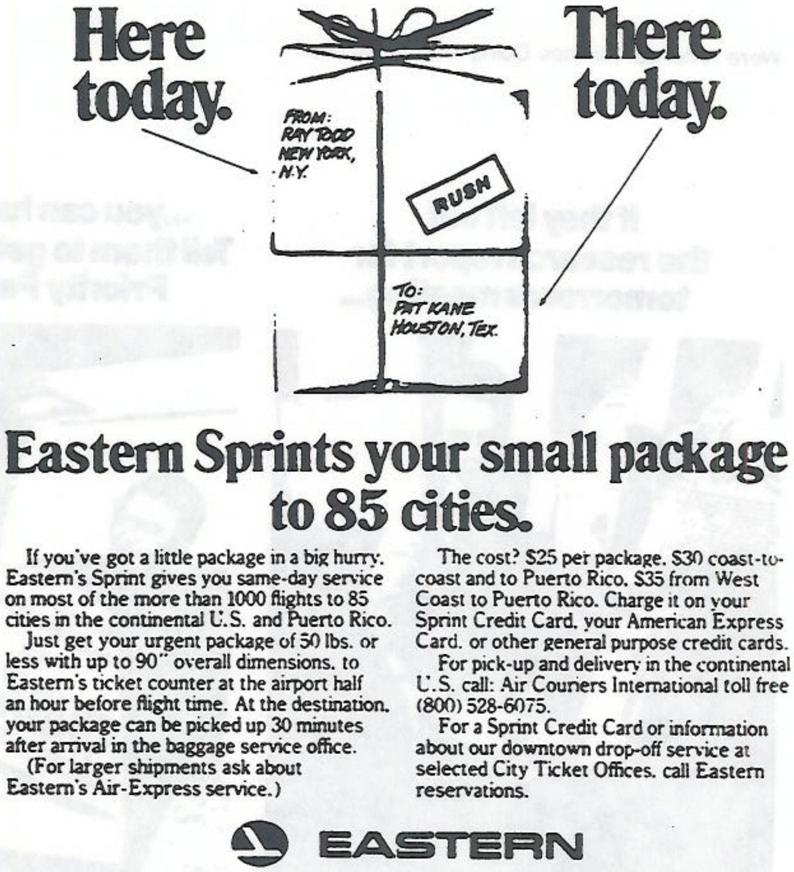
So, when you need to ship a parcel fast, use American's Priority Parcel Service.

Airlines Freight System
633 Third Avenue, New York, N Y 10017 U S A

Get it on American
AMERICAN'S PRIORITY PARCEL SERVICE

Source: Advertisement in *American Way*, July 1976

Exhibit 4
Examples of Airfreight Advertising by Airlines


Here today.
FROM:
RAY TODD
NEW YORK,
N.Y.
RUSH
TO:
PAT KANE
HOUSTON, TEX.
There today.

Eastern Sprints your small package to 85 cities.

If you've got a little package in a big hurry. Eastern's Sprint gives you same-day service on most of the more than 1000 flights to 85 cities in the continental U.S. and Puerto Rico.

Just get your urgent package of 50 lbs. or less with up to 90" overall dimensions. to Eastern's ticket counter at the airport half an hour before flight time. At the destination, your package can be picked up 30 minutes after arrival in the baggage service office.

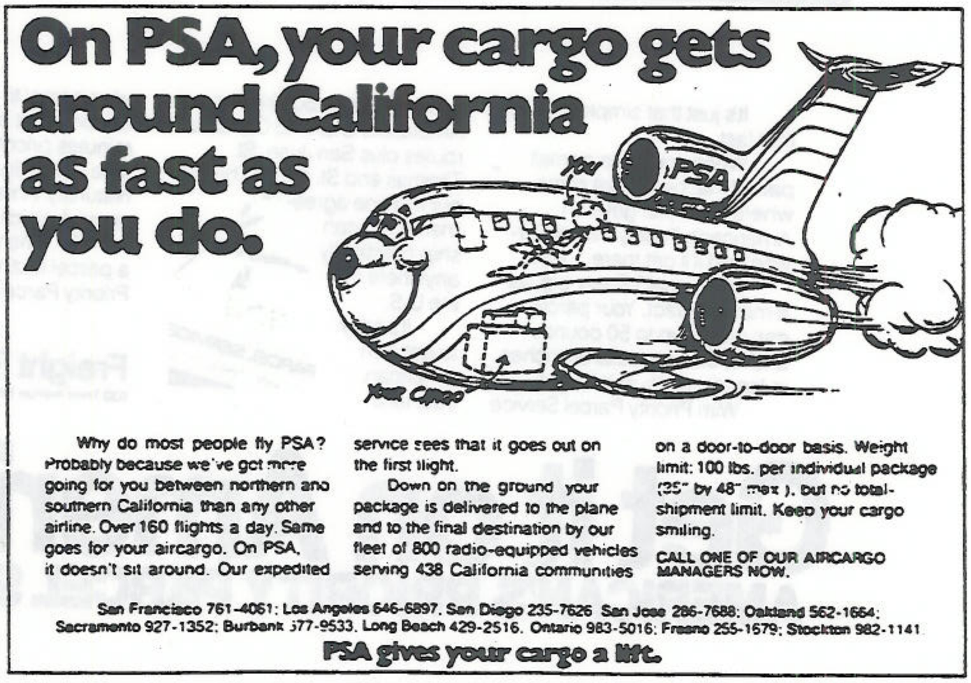
(For larger shipments ask about Eastern's Air-Express service.)

The cost? $25 per package. $30 coast-to-coast and to Puerto Rico. $35 from West Coast to Puerto Rico. Charge it on your Sprint Credit Card, your American Express Card, or other general purpose credit cards.

For pick-up and delivery in the continental U.S. call: Air Couriers International toll free (800) 528-6075.

For a Sprint Credit Card or information about our downtown drop-off service at selected City Ticket Offices, call Eastern reservations.

EASTERN


You
PSA
Your Cargo

On PSA, your cargo gets around California as fast as you do.

Why do most people fly PSA? Probably because we've got more going for you between northern and southern California than any other airline. Over 160 flights a day. Same goes for your aircargo. On PSA, it doesn't sit around. Our expedited service sees that it goes out on the first flight.

Down on the ground your package is delivered to the plane and to the final destination by our fleet of 800 radio-equipped vehicles serving 438 California communities on a door-to-door basis. Weight limit: 100 lbs. per individual package (35" by 48" max.), but no total-shipment limit. Keep your cargo smiling.

CALL ONE OF OUR AIRCARGO MANAGERS NOW.

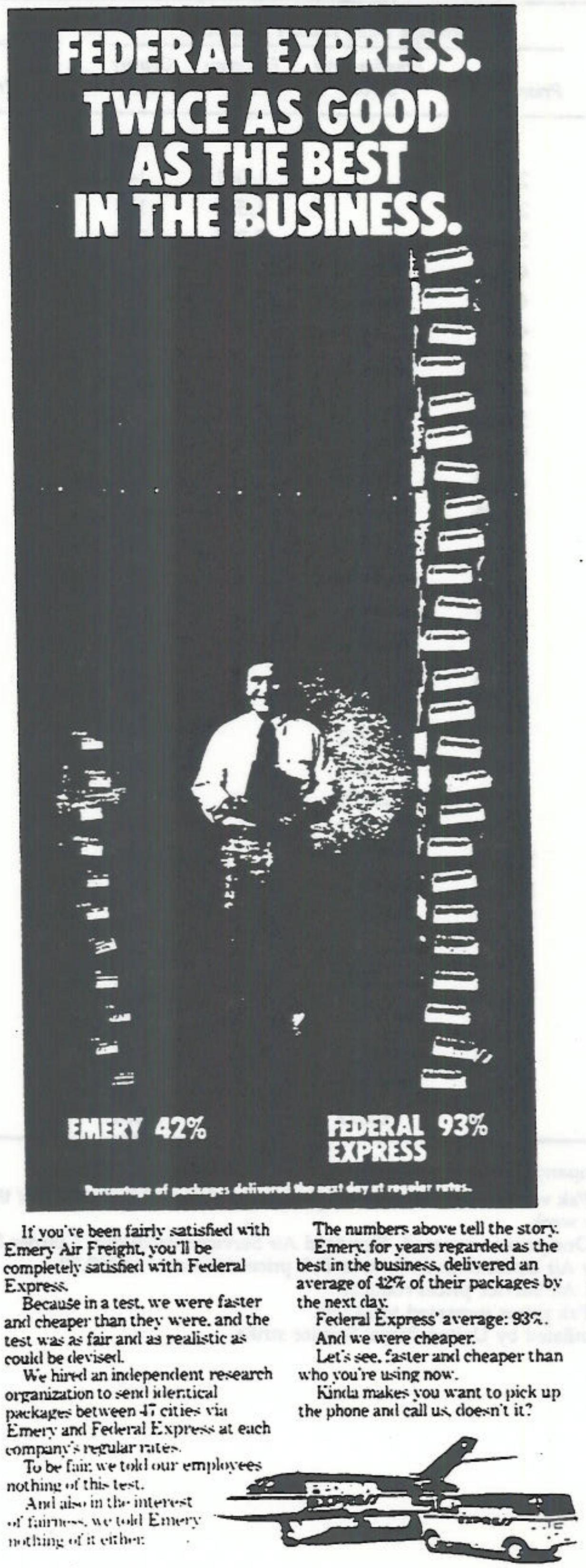
San Francisco 761-4061; Los Angeles 646-6897, San Diego 235-7626 San Jose 286-7688; Oakland 562-1664;
Sacramento 927-1352; Burbank 577-9533, Long Beach 429-2516, Ontario 983-5016; Fresno 255-1679; Stockton 982-1141

PSA gives your cargo a lift.

Source: Advertisements in various business publications, 1976

Exhibit 5

Federal Express: Print Advertising, 1975–1976



FEDERAL EXPRESS. TWICE AS GOOD AS THE BEST IN THE BUSINESS.

EMERY 42%
FEDERAL EXPRESS 93%
Percentage of packages delivered the next day at regular rates.

If you've been fairly satisfied with Emery Air Freight, you'll be completely satisfied with Federal Express.

Because in a test, we were faster and cheaper than they were, and the test was as fair and as realistic as could be devised.

We hired an independent research organization to send identical packages between 47 cities via Emery and Federal Express at each company's regular rates.

To be fair, we told our employees nothing of this test.

And also in the interest of fairness, we told Emery nothing of it either.

The numbers above tell the story.

Emery, for years regarded as the best in the business, delivered an average of 42% of their packages by the next day.

Federal Express' average: 93%.

And we were cheaper.

Let's see, faster and cheaper than who you're using now.

Kinda makes you want to pick up the phone and call us, doesn't it?

Source: Company records

Exhibit 6
Federal Express: Volume/Revenue Trend Analysis, 1974–1976

	Average Daily Package Volume				*Average Daily Revenues ($ thousands)*			
Week Ended	*Priority One*	*Standard Air Service*	*Economy Air*	*Courier Pak*	*Priority One*	*Standard Air Service*	*Economy Air*	*Courier Pak*
1974[a]								
1/4[b]	2,096		1,001	140	28		5	<1
2/1	2,986		1,571	195	39		7	<1
3/1	3,436		2,365	268	45		11	1
4/5	4,115		3,430	481	53		14	2
5/3	4,010		3,991	411	55		17	2
6/7	4,451		4,850	481	64		20	2
7/5[b]	3,952		4,159	525	56		18	3
8/9	4,950		5,436	527	70		23	3
9/6[c]	5,955	2,825	3,617	547	97	33	18	5
10/4	6,350	2,465	4,229	502	103	28	20	4
11/8	6,745	2,003	4,466	511	107	23	21	4
12/6	6,694	2,351	3,033	534	111	28	18	5
1975								
1/10[d]	6,599	2,556		559	119	38		5
2/7	7,033	2,395		575	129	35		6
3/7	7,630	2,266		592	140	34		6
4/4	7,116	2,056		661	132	30		7
5/2	7,553	2,204		764	140	31		8
6/6	7,663	2,252		794	153	31		8
7/4	7,489	2,257		805	148	30		8
8/1	8,076	2,159		745	161	30		7
9/5	9,372	2,142		859	200	33		8
10/3[e]	10,032	2,289		982	215	34		10
11/7	10,384	2,203		987	221	32		10
12/5	11,177	2,600		1,034	238	36		10
1976								
1/9	11,128	2,772		1,090	232	32		11
2/6	11,056	2,918		1,156	230	33		11
3/5[f]	11,248	3,053		1,194	248	35		12
4/2	12,820	4,979		1,370	287	48		13
5/7[g]	13,400	6,022		1,304	298	65		16

Source: Company records

a. Courier Pak volumes tended to be higher in the first and last weeks of the month than at mid-month.
b. Four-day week
c. Priority One prices increased, Standard Air Service introduced, Courier Pak prices increased from $5 to $8.50.
d. Economy Air discontinued, Courier Pak prices increased to $10.00.
e. Standard Air Service prices reduced.
f. Courier Pak prices increased to $12.50.
g. Figures inflated by United Parcel Service strike.

Exhibit 7
Federal Express Courier Pak: Customer Usage Profile, May 1976

Category	*Number of Accounts*[a]	*Number of Courier Paks Used Monthly*	*% of Total Usage*
Manufacturing and distribution, general	639	4,945	17.1
Advertising industry	140	2,285	8.2
Printing and publishing	80	1,558	5.6
Data processing equipment, mfg. and sales	125	1,160	4.1
Office and business equipment (Xerox = 862)	22	1,024	3.7
Marketing research (Burke)	61	886	3.2
Mortgage and investment banking	98	733	2.6
Computer service bureau	50	686	2.5
Electronic parts and components	76	679	2.4
Communications (telephone electronics)	34	631	2.3
Law firms	94	598	2.1
Insurance companies and agents	38	568	2.0
Service and leasing	76	537	1.9
Medical/dental/optical equipment and supplies	41	476	1.7
Aviation manufacturing and sales	57	448	1.6
Internal Revenue Service	36	443	1.6
Freight forwarders and transport	51	380	1.4
Engineering firms	44	346	1.2
Construction	37	318	1.1
Pharmaceuticals manufacturing	28	304	1.1
Medical/dental labs	16	252	0.9
Motion picture/film industry	30	238	0.8
Real estate	48	233	0.8
Chain store	42	225	0.8
CPA—accounting	45	222	0.8
Consultants (management and research)	53	196	0.7
Import/export brokers	13	190	0.7
Banks	23	181	0.6
Stocks and bonds brokers	14	147	0.5
Record industry	18	120	0.4
Architects and designers	14	114	0.4
Medical care (hospitals)	15	90	0.3
TV stations	16	83	0.3
TV broadcasting	8	47	0.2
Trade associations	5	37	0.1
Subtotal	2,187	21,380	76.3
Miscellaneous categories	na	946	3.6
Unclassified[b]	na	5,632	20.1
Total	na	27,958	100.0

Source: Company records

a. Some companies had more than one account, representing several departments at a single location or several locations of the same company.

b. These were sales by users without an FEC account (either infrequent users or new users not yet assigned an account number).

Exhibit 8
Market Statistics for Selected Emergency, Rush, and Special Handling Packages

	Pieces per Day
Express mail[a] (Estimated @ $6.00/piece)	4,400[c]
Registered mail[b] (Estimated @ $3.00/piece)	256,960
Certified mail[b] (Estimated @ $.50/piece)	295,156
Special delivery mail[b] (Estimated @ $1.50/piece)	301,232
Airline over the counter[a] (Estimated @ $50.00/piece)	11,000
Skycab and VIP services[a] (Estimated @ $90.00/piece)	1,000
Total	869,748

Source: Company records

a. Estimates from FEC marketing plan

b. Actual figures 1974–1975 *Annual Report* of the Postmaster General, p. 52.

c. USPS was expanding its Express Mail network rapidly. By June 1976, this service was available at major post offices in 410 cities nationwide.

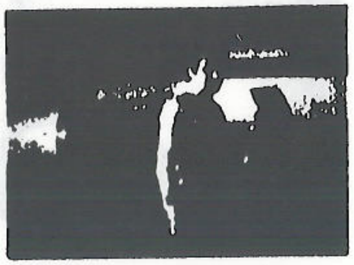
Exhibit 9

Federal Express: TV Storyboards for 1976 and 1977 Advertising

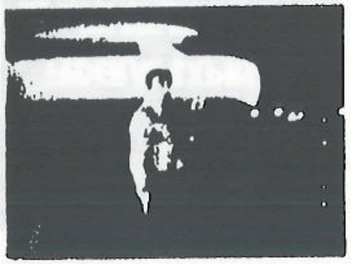
Carl Ally Inc.
437 MADISON AVENUE, NEW YORK, N.Y. 10022
MURRAY HILL 8-5300

Client: FEDERAL EXPRESS
Product: FEDERAL EXPRESS
Title: "OVERNIGHT"
Commercial No.: QFAS6304 · 30 SECONDS
Date Approved: 6/28/76

1. ANNCR: When a freight forwarder like Emery or Airborne

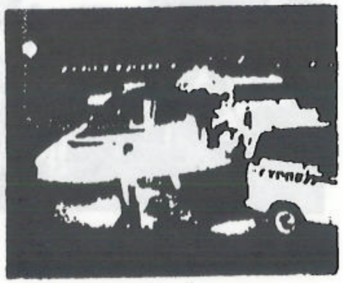


2. promises to deliver your packages overnight, he's relying on the passenger airlines.



3. But 80% of their planes spend the night on the ground.

4. When Federal Express promises to deliver your packages overnight,

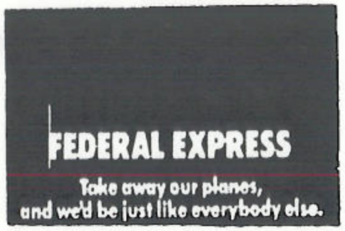


5. we're relying on no one but ourselves.

6. Because we own our own planes. And they fly when we say so,

7. overnight.

8. (SFX: VVVVRRRR-OOOOMMMM.) ANNCR: (VO) Federal Express.



FEDERAL EXPRESS

Take away our planes,
and we'd be just like everybody else.

Exhibit 9 (continued)

Client: FEDERAL EXPRESS
Product: FEDERAL EXPRESS
Title: "RELIABLE"
Commercial No.: QFAS6302 · 30 SECONDS
Date Approved: 6/28/76

1. ANNCR: If Federal Express misplaces a package,

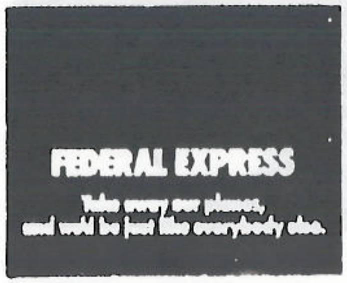
2. there's only a few places it can be.

3. For instance, here in one of our trucks,

4. or here, in one of our own planes.

5. If one of our competitors misplaces a package,

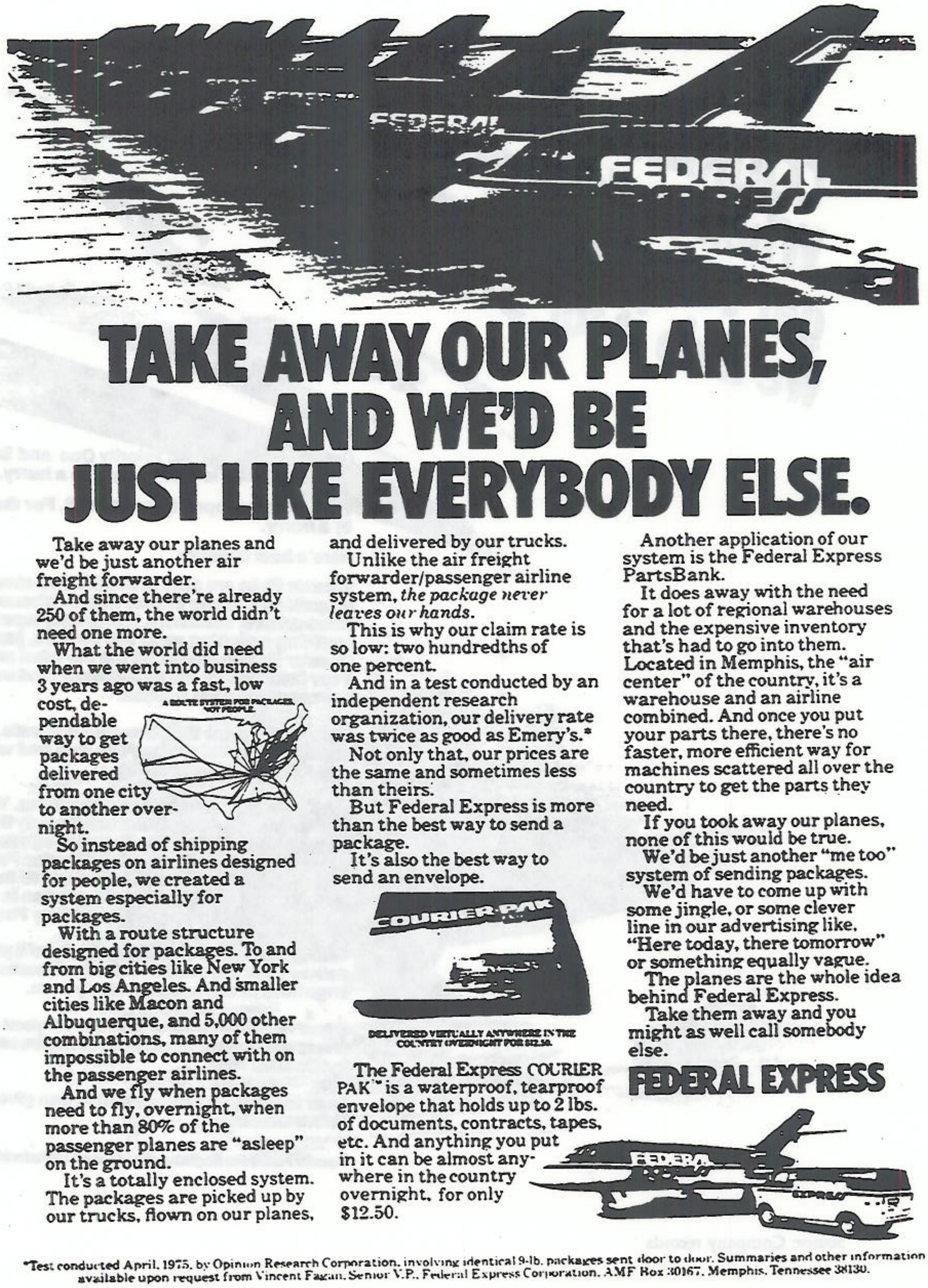
6. it's either on his truck, or on American, United, TWA, Delta, Braniff, Continental, Eastern,


FEDERAL EXPRESS
Take away our planes,
and we'd be just like everybody else.

7. PSA, Western, National. (FADES OUT.)

Source: Company records

Exhibit 10
Federal Express: Print Advertising for 1976–1977


FEDERAL
FEDERAL EXPRESS
COURIER-PAK
FEDERAL
EXPRESS

TAKE AWAY OUR PLANES, AND WE'D BE JUST LIKE EVERYBODY ELSE.

Take away our planes and we'd be just another air freight forwarder.

And since there're already 250 of them, the world didn't need one more.

What the world did need when we went into business 3 years ago was a fast, low cost, dependable way to get packages delivered from one city to another overnight.

A ROUTE SYSTEM FOR PACKAGES, NOT PEOPLE.

So instead of shipping packages on airlines designed for people, we created a system especially for packages.

With a route structure designed for packages. To and from big cities like New York and Los Angeles. And smaller cities like Macon and Albuquerque, and 5,000 other combinations, many of them impossible to connect with on the passenger airlines.

And we fly when packages need to fly, overnight, when more than 80% of the passenger planes are "asleep" on the ground.

It's a totally enclosed system. The packages are picked up by our trucks, flown on our planes, and delivered by our trucks.

Unlike the air freight forwarder/passenger airline system, *the package never leaves our hands.*

This is why our claim rate is so low: two hundredths of one percent.

And in a test conducted by an independent research organization, our delivery rate was twice as good as Emery's.*

Not only that, our prices are the same and sometimes less than theirs.

But Federal Express is more than the best way to send a package.

It's also the best way to send an envelope.

DELIVERED VIRTUALLY ANYWHERE IN THE COUNTRY OVERNIGHT FOR $12.50.

The Federal Express COURIER PAK™ is a waterproof, tearproof envelope that holds up to 2 lbs. of documents, contracts, tapes, etc. And anything you put in it can be almost anywhere in the country overnight, for only $12.50.

Another application of our system is the Federal Express PartsBank.

It does away with the need for a lot of regional warehouses and the expensive inventory that's had to go into them. Located in Memphis, the "air center" of the country, it's a warehouse and an airline combined. And once you put your parts there, there's no faster, more efficient way for machines scattered all over the country to get the parts they need.

If you took away our planes, none of this would be true.

We'd be just another "me too" system of sending packages.

We'd have to come up with some jingle, or some clever line in our advertising like, "Here today, there tomorrow" or something equally vague.

The planes are the whole idea behind Federal Express.

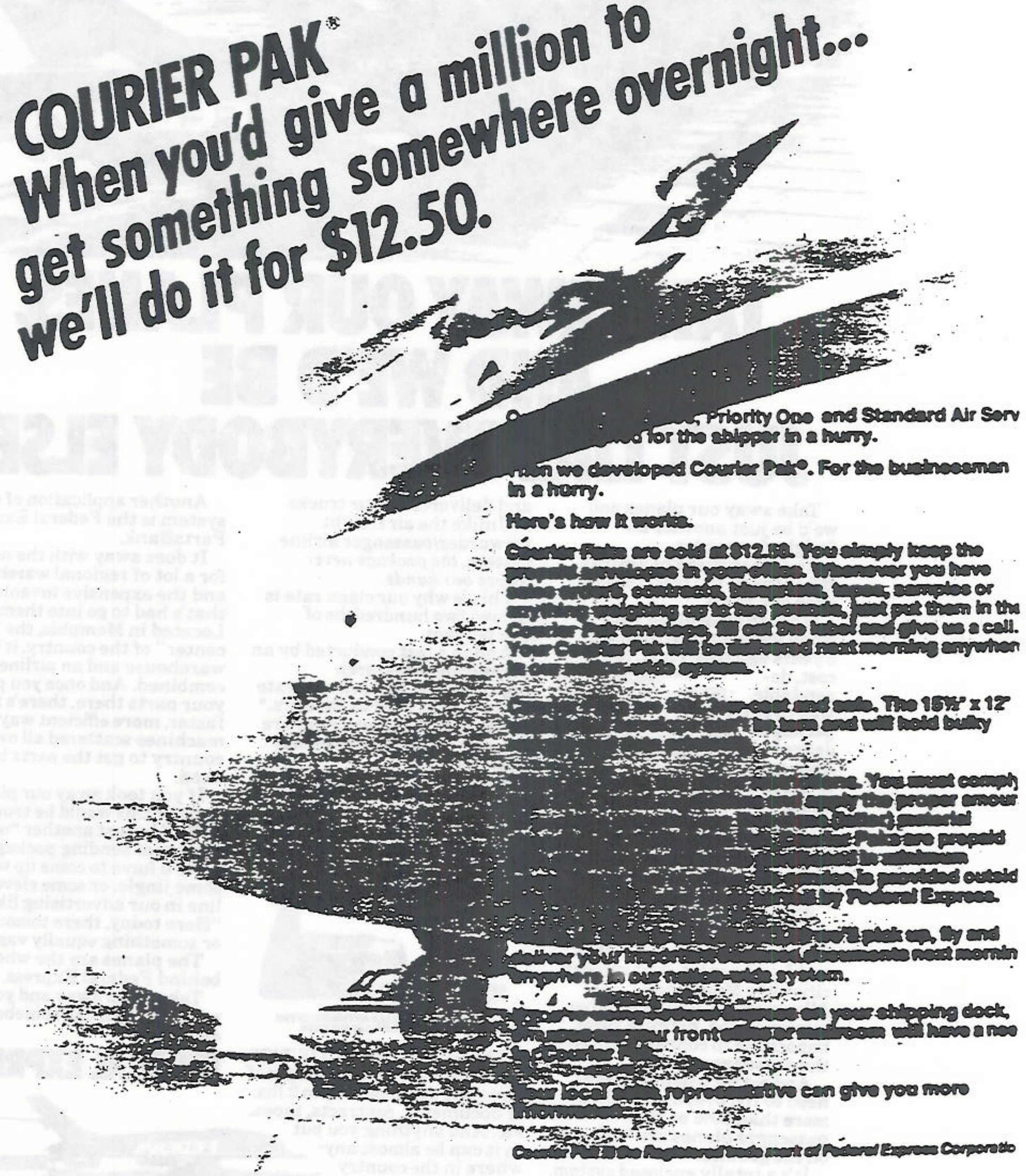
Take them away and you might as well call somebody else.

FEDERAL EXPRESS

*Test conducted April, 1975, by Opinion Research Corporation, involving identical 9-lb. packages sent door to door. Summaries and other information available upon request from Vincent Fagan, Senior V.P., Federal Express Corporation, AMF Box 30167, Memphis, Tennessee 38130.

Source: Company records

Exhibit 11
Federal Express: Courier Pak Promotion on Customer Brochure, Summer 1976


COURIER PAK®
When you'd give a million to
get something somewhere overnight...
we'll do it for $12.50.

[illegible], Priority One and Standard Air Serv [illegible] for the shipper in a hurry.

[illegible] we developed Courier Pak®. For the businessman in a hurry.

Here's how it works.

Courier Paks are sold at $12.50. You simply keep the prepaid envelopes in your office. Whenever you have sales orders, contracts, blueprints, tapes, samples or anything weighing up to two pounds, just put them in the Courier Pak envelope, fill out the label and give us a call. Your Courier Pak will be delivered next morning anywher in our nation-wide system.

[illegible] low-cost and safe. The 15½" x 12" [illegible] be torn and will hold bulky [illegible]

[illegible] You must comply [illegible] apply the proper amour [illegible] material [illegible] Courier Paks are prepaid [illegible] in minimum [illegible] service is provided outsid [illegible] by Federal Express.

[illegible] we'll pick up, fly and deliver your important [illegible] documents next mornin anywhere in our nation-wide system.

[illegible] on your shipping dock, [illegible] your front office or mailroom will have a nee [illegible] Courier Pak.

Your local sales representative can give you more information.

Courier Pak is the Registered trade mark of Federal Express Corporatio

Source: Company records

Exhibit 12
Cost of One Page Advertising in Selected Periodicals, 1976

	Cost of One Full Page Insertion	*Circulation*
Vertical Publications		
Advertising Age	$ 5,200	68,063
Broadcasting	2,800	32,267
Journal of Marketing	520	16,669
Graphic Arts Monthly	3,350	76,245
Banking	2,390	43,816
Savings & Loan News	3,200	63,174
ABA Journal (law)	5,000	200,755
Insurance Magazine	725	14,256
Journal of Accountancy	1,890	186,382
The Secretary	950	49,135
General Publications		
Newsweek	22,650	3,028,000
Wall Street Journal	27,972	1,733,000
Time	31,925	3,502,000
Business Week	11,920	1,564,000
U.S. News and World Report	15,690	1,885,000
Sports Illustrated	20,290	2,353,000

Source: Company records

Exhibit 13
Press and TV Advertising Costs in Selected Major Market Areas

I. Cost of One Full Page Advertisement in Leading Daily Newspapers, 1976

Newspaper	*Cost of One Full Page Insertion*	*Circulation*
New York Times	$12,192	806,495
Chicago Tribune	10,769	750,707
Washington Post	8,207	534,400
Los Angeles Times	9,840	1,000,866
San Francisco Chronicle	8,211	457,310

II. Cost of 30-Second TV Spot on Leading Stations in Selected Cities, 1976

		Prime Time		*Late Evening*	
TV Station	*City*	*Cost*	*Audience Males 18–49*	*Cost*	*Audience Males 18–49*
WAGA	Atlanta	$ 900	108,000	$ 340	77,000
WNAC	Boston	1,500	212,000	750	94,000
WFAA	Dallas	2,200	365,000	550	100,000
WPLG	Miami	1,222	160,000	540	87,000
WCCO	Minneapolis	900	86,000	450	111,000
WCBS	New York	6,050	964,000	1,500	398,000
WCAU	Philadelphia	1,500	216,000	1,200	137,000
WTOP	Washington D.C.	1,500	189,000	550	79,000
WCPO	Cincinnati	450	63,000	275	63,000
KHOU	Houston	1,150	107,000	1,000	127,000

Source: Company records

Harvard Business School

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12

WHARTON REPROGRAPHICS

BECTON DICKINSON & COMPANY:

VACUTAINER Systems Division

On Thursday, August 1, 1985, William Kozy, national sales director for Becton Dickinson VACUTAINER® Systems (BDVS), and Hank Smith, BDVS's vice president of marketing and sales, slumped into their seats on the evening flight from Chicago to Newark. They had just completed their fifth round of negotiations in as many months with the materials manager of Affiliated Purchasing Group (APG), a large hospital buying group. Historically, BDVS had supplied most blood collection products bought by individual APG-member hospitals. But in April, APG had announced its intention of initiating group purchasing of one brand of blood collection products for all member hospitals. Since then, Kozy and Smith had represented BDVS in repeated negotiations with APG, while APG had also been negotiating with BDVS's competitors.

The subject of the negotiations was the pricing and delivery terms of a proposed purchasing agreement between APG and BDVS. Traditionally, all of BDVS's products had been sold through its distributors, who also negotiated prices for those (and other) products directly with hospital customers. In recent years, however, BDVS had begun a new form of sales agreement, known as a "Z contract," in which BDVS negotiated prices and quantities directly with large accounts but supplied its products through one or more of its authorized distributors. Pricing decisions concerning specific Z contracts were made by a committee composed of Kozy, Smith, and Ed Mehl, contracts administration manager. Alfred Battaglia, president of BDVS, was also involved in establishing the terms of such contracts with some large customers.

The August 1 meeting with APG had been an all-day session, at the end of which both sides agreed that BDVS would submit its final proposal by August 15. At issue were the specific prices and terms for BDVS's two major products. In addition, there were questions raised regarding which distributors would be used to service the contract, and APG negotiators had urged BDVS to consider manufacturing a private label for APG.

Professor Frank V. Cespedes and Professor V. Kasturi Rangan prepared this case as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. Certain company data, while useful for discussion purposes, have been disguised.

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"They're bringing out the big guns this time," noted Kozy as the plane began to taxi down the runway. "They certainly are," agreed Smith, "and we'll have to decide what we do about that. Al Battaglia wants to meet with us tomorrow at 1 p.m. about the APG contract. Let's review the situation one more time and make our recommendations."

Company Background

Becton Dickinson (BD) manufactured medical, diagnostic, and industrial safety products for health care professionals, medical research institutions, industry, and the general public. Sales in 1984 were $1.127 billion, with 75% coming from U.S. operations (see Exhibit 1). The company had three business segments--Laboratory, Industrial Safety, and Medical Products--each a profit center with separate marketing responsibilities.

Medical Products had three divisions: (1) needles, syringes, and diabetic products, (2) pharmaceutical systems, and (3) VACUTAINER blood collection systems, which accounted for a significant portion of Medical Products' operating income. In its 1984 annual report, BD management noted:

> Despite limited sales growth, BD maintained or increased its market share in every major medical product category. We attribute this to three factors: our strong reputation and brand identification, our ability to hold down production costs and thereby prices, and our continuing commitment to quality.

Management also outlined certain "core strategies to guide the company's activities in the marketplace," including "substantial improvements in research and the development of new technologies basic to the company's overall strategy. In a constantly changing industry such as ours, the successful development and introduction of new products are the company's lifeblood over the long run."

Becton Dickinson VACUTAINER® Systems Division (BDVS)[1]

Alfred Battaglia was president of BDVS. He had previously served in various financial positions for BD. Hank Smith was vice president for marketing and sales. Reporting to Smith were three product managers, each responsible for one of the division's product groups, and a sales director, William Kozy, responsible for achieving sales targets through six regional managers who in turn managed 55 sales representatives. (See Exhibit 2 for BDVS organization chart.)

---

[1] Both VACUTAINER® and MICROTAINER® are registered trademarks of Becton Dickinson and Company.

Products

BD introduced blood collection products in the late 1940s. BDVS was formed as a business unit in 1980 with three major product groups having total 1984 sales of $90 million: venous blood collection (about 70% of BDVS sales) consisting of VACUTAINER tubes and needles; capillary blood collection consisting of MICROTAINER tubes and lancets; and microbiology systems consisting of culture tubes and specimen collectors. Each product group accounted for about 33% of BDVS's 1984 operating income.

Venous blood collection systems consisted of a needle and vacuum tube used for collecting blood from a patient's veins. VACUTAINER was the BD brand name for a broad line of tubes and needles designed to meet hundreds of differing needs in hospitals, medical laboratories, and physicians' offices. (See Exhibit 3 for sample products.)

In venous blood collection, the tubes were coated with reagents to preserve the integrity of the specimen (the stoppers on the tubes were color coded to indicate the specific reagent inside). The laboratory technician, known as a phlebotomist, collected blood in different tubes depending on the type of test required by the patient's doctor.

Evacuated-tube blood collection was considered superior to the older needle-and-syringe method in providing specimen integrity, convenience, and lower costs. BD was the pioneer in converting the market to evacuated tubes. According to industry sources, BD had an estimated 80% market share in the United States, where nearly 100% of venous blood collection had been converted to evacuated-tube methods (worldwide, evacuated tube methods accounted for less than 40% of blood collection).

Capillary blood collection systems consisted of a lancet for pricking the patient's finger and a tube (MICROTAINER® was the BD brand name) used for blood collection and testing. MICROTAINER tubes used capillary action and gravity for collecting blood samples of smaller volumes than those generally collected by the venous method. MICROTAINER systems could be used for the same blood tests administered through VACUTAINER systems, but the common applications for MICROTAINER were in single-tube collections for infants, children, and geriatric patients.

The division marketed VACUTAINER and MICROTAINER systems as complete blood collection systems, but other suppliers' needles and lancets could be used on BD tubes and vice versa. On average, about 2.5 tubes were used per needle, with an estimated 1985 U.S. Market, in units, of 80 million tubes and 32 million needles.

Microbiology systems provided a sterile environment for transferring blood specimens from the collection to the testing site. The division's microbiology tubes and collectors were all marketed under the VACUTAINER brand name.

BDVS had the broadest line of blood collection products in the industry. Peter Trow, sales representative for BDVS, noted:

> In this business, quality is not merely a function of needle sharpness or the integrity of the reagents. We also offer the widest range of tubes, and that's crucial. Big hospitals and labs run a multitude of tests, and they require product assortment and color coding schemes to make their jobs easier. That is part of their definition of quality.

Cost-containment pressures resulted in a 1.0% compounded annual decline in hospital blood testing between 1983 and 1985. Forecasts indicated hospital blood testing would decline through 1987, but an aging U.S. population should increase testing somewhat in subsequent years. Testing in commercial labs and physicians' offices was expected to be 40% of total blood testing by 1990.

Total microcollections were forecast to increase 5% annually through 1990 as less expensive, easier-to-use equipment motivated physicians to do more testing in their offices rather than via a hospital or commercial lab. Battaglia also noted that blood collection technology was changing rapidly:

> The clear technological trend is to enable end-users to do more of the diagnostic testing. This means more testing can be done in nonlaboratory settings such as doctors' offices. In turn, that has implications for our distribution network, which tends to be built around lab distributors rather than the medical/surgical distributors who sell to nonlab locations. The technological developments also place more technical selling demands on our sales force.

Industry Background

Blood collection products were used in hospitals, commercial laboratories, and many nonhospital health care centers.

Hospitals. In 1985 approximately 7,000 U.S. hospitals performed 70% of all blood tests. Blood collection was generally performed at the patient's bedside and the sample then sent to a hospital laboratory for testing. The 1,800 largest hospitals (200 or more beds each) accounted for 50% of the market for medical equipment and supplies.

Within hospitals, the buying process for medical supplies, including blood collection products, was complex and changing. The primary contact of a BDVS salesperson varied depending upon usage requirements and the purchasing process in an individual hospital. Robert Giardino, senior sales representative for BDVS, noted that:

> Blood collection tubes are a key product for a hospital lab: if the specimen is not collected properly, the lab has many problems. Hospitals order tubes frequently; most have a standing weekly order with one or more distributors for tubes.

The hospital's chief lab technician is usually the person responsible for testing, ordering supplies, and handling administrative matters. In a large teaching hospital, this person might have an M.D. or a Ph.D.; in other hospitals, it would be someone who came up through the lab ranks. On average, there are six subsidiary lab departments, each headed by a supervisor who reports to the chief lab technician.

Purchasing influences vary, depending on the specific product. In general, the "bench people" (i.e., medical technicians in the lab) have product preferences, and these people tend to be concerned with the best quality and not price. Among the bench people, VACUTAINER is the best-known brand of blood collection tubes. But the department heads and chief lab technicians have budgets to meet. Increasingly, upper levels of hospital administration, and especially the materials managers (who perform a role analogous to that of purchasing agents in industrial concerns), are more influential. These people tend to come from different backgrounds than the lab people do, and they are always price sensitive.

In most hospitals, medical supplies accounted for 10% to 15% of a hospital's total costs, while the logistical expenses associated with supplies made up another 10% to 15%. Labor costs usually accounted for at least 70%. Blood collection products typically accounted for less than 5% of the total supplies purchased. A smaller, 100-bed hospital might purchase 40 cases of tubes (each case contained 1,000 tubes) and 20 cases of needles (each case contained 1,000 needles) annually, while a large 1,100-bed hospital, such as Massachusetts General Hospital, purchased about 1,700 cases of tubes and 800 cases of needles annually.

Commercial laboratories. In 1985, 700 commercial labs in the United States performed about 25% of all blood tests. Larger national labs had 15 to 20 lab locations for which the company purchased blood collection products centrally. In these labs, the purchase process for blood collection products was similar to that in large hospitals. Most commercial labs, however, were smaller, single-location companies where the owner-manager often supervised all purchases personally. In both large and small labs, according to Giardino, "The purchasers are cost conscious, because commercial labs compete with each other primarily on price."

Commercial labs analyzed blood samples sent to them by physicians or small health care centers that had collected the blood but lacked either equipment or expertise to perform tests. Many commercial labs also performed blood tests for hospitals for a fee. A significant percentage of a commercial lab's total revenues came from blood collection and testing.

Nonhospital health care centers. In 1985 these accounted for about 5% of blood collection and testing in the United States. But easier-to-use and less expensive technology, as well as changing patterns in health care, indicated that nonhospital centers would account for increased proportions of blood testing in coming years.

In 1985 there were approximately 250,000 physicians in 180,000 offices throughout the United States. A number of physicians--often, 50 to 60 per group--were affiliated with forms of group medical care. These physicians were increasingly performing in their offices many medical activities previously subcontracted to commercial labs or hospitals.

Other nonhospital sites--such as surgicenters, emergency centers, and free-standing diagnostic centers--were also increasing in number. They were expected to perform a higher proportion of medical activities during the coming decade, including blood collection and testing.

Market Trends

> Few industries have gone through such intense trauma in the past two years as the market for health care. New cost containment pressures have forced a wave of cutbacks: hospital use has dropped precipitously, hospitals have shaved their own costs dramatically, and an estimated 100,000 jobs have been lost in a range of health care fields. Out of such chaos a new order seems destined to emerge.[2]

In 1983 a change in how the U.S. government reimbursed hospitals for Medicare patients (40% of all hospital patient days) affected the entire health care industry. Previously, hospitals had been reimbursed for all costs incurred in serving those patients. Most observers agreed this cost-plus system did not reward hospitals for efficiency. Federal legislation in April 1983 provided for a change (over a four-year period) to a payment approach based on diagnosis-related groups (DRGs).

Under the new system, the payment to a hospital was based on national and regional costs for each DRG, not on the hospital's costs. Moreover, the national and regional averages were to be updated, so that if hospitals improved their cost performance, they would be subject to stricter DRG-related payment limits.

By 1985 the impact had been dramatic. In 1984, hospital admissions fell 4%, the largest drop on record, according to the American Hospital Association; the average length of a patient's hospital stay fell 5% to 6.7 days, also the largest drop ever. For the first time, admission of people over the age of 65 fell. Nonhospital treatment--especially in-home treatment--was expected to account for larger proportions of health care. Conversely, estimates[3] indicated that the number of hospital beds would fall to 650,000 in 1990 from one million in 1983. In their place, it was expected that a variety of smaller, short-term health care facilities would proliferate.

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[2] Newsweek, April 15, 1986, p. 79.

[3] Cited in "Hospital Suppliers Strike Back," The New York Times, March 31, 1985.

Another important development was increased concern among employers and insurers about the costs of health insurance. Many corporations began to adopt health insurance plans that encouraged patients to shorten their hospital stays and to shun more expensive inpatient treatment in favor of outpatient care.

Thus, changes in health insurance were also expected to spur growth in nonhospital medical care. In 1985, many hospital administrators felt that, for the first time, they faced effective, increasing competition and a need to reduce costs. One response was the acceleration of a trend toward the formation of multihospital chains and multihospital buying groups. Both types of organization were intended to increase the purchasing power of hospitals for equipment and supplies. In 1985, about 45% of all U.S. hospitals were affiliated with multihospital chains, and it was predicted that 65% would be so affiliated by 1990. Similarly, in 1985 most hospitals were members of buying groups.

Multihospital chains were usually for-profit hospitals that purchased most supplies and equipment through centralized buying organizations. In these chains, individual hospitals submitted purchase requirements and preferences for specific products, but price and delivery terms were negotiated centrally. Buying groups were looser affiliations of not-for-profit hospitals. Like chains, purchases for buying groups were handled centrally; but individual hospitals were often free to accept or reject the terms negotiated on a specific item by the central buying group. Thus, if a given hospital's administration or lab personnel had a strong preference for a given brand, and the buying group had negotiated a volume discount for a different brand, that hospital might purchase its tubes separately while purchasing other items through the centralized buying group. In addition, many hospitals belonged to several buying groups, purchasing different items through different buying groups depending upon the product, specific prices, and other factors. One BD manager noted:

> The chains and buying groups structure negotiations on the premise that they can deliver so many thousands of beds to the manufacturer with the best price. But the actual strength of these groups varies. In some, all of their hospitals purchase through the centralized procedure. In others, a large percentage of the member hospitals do not adhere to the centralized procedure. The result is that the purchasing leverage differs from one group to the next.
>
> In addition, individual hospitals belong to a number of different buying groups, and often switch from one group to the next. The result is that the various buying-group headquarters organizations in effect compete actively with each other to attract and retain hospital clients. Nonetheless, there is no doubt that chains and buying groups have increased the pricing pressures on both manufacturers and distributors of health care products in recent years.

Competition

Competition in the blood collection market was primarily among BD and two other firms. Terumo, a Japanese company, was a global competitor with a 1984 U.S. market share of about 18% in evacuated blood collection tubes and nearly 50% in blood collection needles. Sherwood Medical Corporation's Monoject division was predominantly a U.S. competitor with a U.S. market share of about 2% in tubes and 15% in needles.

Over the past seven years, BDVS had maintained about an 80% share of the U.S. evacuated blood collection tube market while increasing its average unit price from about 6 cents to 8 cents. During that time, Terumo had increased its share from 10% to 20% while maintaining its price at about 6.5 cents per unit. In blood collection needles, however, BDVS's share had dropped from 40% to 30% during this period, while Terumo had doubled its share from 25% to 50%. In needles, BDVS and Terumo charged approximately 7.5 cents per unit, while Sherwood charged about 10 cents per unit.

A primary objective for BD in both tubes and needles was to maintain a leading market share. Management believed that Terumo was also committed to increasing its share in all segments and would continue to price aggressively. BD planned to combat such competition through accelerated new product developments and annual improvements in product quality, while using its strong market share to become the lowest-cost producer in all product segments.

An important element in BD's marketing strategy was what one executive termed "quality aggression." Since BD had vertically integrated into the production of components such as glass tubes and rubber stoppers, it could keep a tight hold on quality. In addition, BD could process reagents and chemicals in its own plants to especially demanding specifications and pioneer in new tube sterilization techniques that demanded large capital investments in radiation equipment. As one manager noted, "This raises our costs but also forces our competitors to raise their costs even more, since our higher volume allows us to amortize the capital investments over a larger base."

In the past, major companies, including Corning Glass, Abbott Labs, and Johnson & Johnson, had participated in the blood collection market but had then withdrawn. However, BDVS management believed new technologies could provoke renewed competition from these firms as well as from companies that might enter the market from a base in computer equipment, other forms of medical diagnostic equipment, or biotechnology.

BDVS Marketing and Sales Programs

BD's blood collection products were initially sold through the Medical Products group pooled salesforce. In 1980, however, separate salesforces were established for VACUTAINER products and a number of other Medical Products divisions. Battaglia explained:

> The basic reason for the reorganization was that the different products were sold to different buyers within hospitals and had different selling requirements. Our division's products require our salespeople to speak with phlebotomists, nurses, physicians, and other technical people as well as the administrators and materials managers at an account. The salespeople must also know a great deal about the people and procedures in the various hospital labs.
>
> In addition, developments in blood collection technology also made our product line wider and required salespeople to learn more about more complex products. Our new product development plans also supported a move toward a separate VACUTAINER salesforce.

In 1985 BDVS had 55 sales representatives organized into territories based on the number of hospital beds in a given area. Territories ranged from 10,000 to 20,000 beds. All hospital, commercial lab, and distributor accounts within a territory were the responsibility of that territory rep. Territory reps reported to one of six regional managers, who in turn reported to William Kozy, the national sales director.

Each BDVS sales rep had about 100 accounts and typically made five sales calls daily, four on hospital labs, and one on either a distributor or nonhospital lab. A large metropolitan hospital might receive two or three calls monthly, while a small rural hospital might receive one or two calls annually. One rep noted:

> Our sales strategy has traditionally been to sell from the bottom up: we try to work with as many of the bench people as possible--that is, the lab technicians who actually use blood collection products, who care about the quality of what they use, and who will complain to the administrators if they do not get the product they want. BD has a reputation for being more responsive than other firms to end-users.
>
> I think we've maintained our market share because of this philosophy. In recent years, I've seen a number of instances where materials managers wanted to standardize their purchases around a less expensive blood collection product, but the lab people complained and insisted on our product.

During the past year the division had introduced a new needle and had placed major emphasis on converting accounts from competing needle brands. Several sales promotions in 1985 for VACUTAINER needles gave sales reps cash awards for conversions. Results had been very positive, including the conversion of nearly 66,000 beds from competitive needles and a substantial increase in market share for VACUTAINER needles during the last four-month promotion campaign (11/1/84 through 2/28/85).

Distribution

BDVS sold its products through 474 independent distributors who fell into two categories, laboratory products distributors and medical-surgical products distributors. A laboratory products distributor called on hospital and commercial labs and carried a range of items such as glassware, chemicals, spectrometers, lab coats, and thousands of other supply items as well as tubes and needles. According to one BDVS executive, "Lab products distributors feel they must carry blood collection products, which hospitals order regularly, because hospitals often order the more expensive, higher-margin items along with those staple products." Medical-surgical products distributors called on physicians' offices and other nonhospital sites and carried items such as gowns, wheelchairs, examination tables, and other products in addition to tubes and needles.

Battaglia noted that the distribution policies of BDVS and other BD divisions were developed and executed separately:

> We use many of the same distributors other BD divisions do, but the importance of various distributors to different divisions can vary significantly. For example, most of our sales are through lab products distributors, while other divisions sell more of their products through medical-surgical distributors. Those two types of distributors attend different conventions and speak different languages. In addition, we sell nearly all of our products through distributors, but some other BD divisions have a greater percentage of direct sales.

Nationally, there were over 1,000 distributors of hospital/medical supplies, hut the 10 largest accounted for nearly 80% of hospital supply sales made through distributors. At BDVS, its 6 largest distributors accounted for more than 65% of division sales, the 50 largest for 85%, and 67 of the division's 474 dealers for nearly 95% of division sales.

BDVS's largest distributor was American Scientific Products (ASP), a division of American Hospital Supply Corporation (AHS), which in 1984 had total sales of $3.45 billion.[4] ASP was the largest lab products distributor in the United States, with an estimated 40% market share among distributors of products to hospital and commercial laboratories. In 1984, ASP accounted for a similar share of BDVS's sales.

ASP had 21 warehouse locations in the United States. It had installed computer terminals in major hospitals and become an important part of their logistical systems for purchasing supplies. According to ASP, for every dollar a hospital spent on a product, the hospital also spent nearly an additional dollar on acquiring and storing that item. Thus, less costly order entry and delivery could have a significant impact for supply items.

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[4] In 1985, American Hospital Supply merged with Baxter-Travenol, Inc., a manufacturer of medical equipment. The merged company was known as Baxter-Travenol and had 1985 sales of approximately $5 billion.

AHS also began in 1978 a Corporate Program for multilocation hospital accounts. Under this program, a hospital chain would agree to purchase from 50% to 75% of its supplies through ASP, which, in return, would automate the hospital's inventory and materials-handling procedures, promising substantial reductions in overall costs. By 1985, other national distributors of hospital supplies also offered "Prime Vendor" programs analogous to AHS's Corporate Program. But it was estimated that AHS's program encompassed over 13% of the hospital beds in the United States, with a total annual dollar volume in excess of $500 million.

ASP paid higher commissions to its salespeople for selling AHS products. One AHS vice president was quoted as saying: "We manufacture 45% of what we distribute, but our manufactured products represented 70% of our profits last year. Before long, we hope to manufacture 65% of what we distribute."[5]

Terumo and Sherwood products were also distributed by ASP. Between 1979 and 1981, according to estimates by industry sources, over 70% of Terumo's U.S. sales went through ASP. Beginning in 1981, BDVS managers sought to build its relationship with ASP. BDVS managers held frequent meetings with ASP management, and BDVS salespeople were encouraged to devote more time to sales meetings and product training sessions with ASP branches. In addition, as one BDVS manager noted, "We made clear to ASP our commitment to maintaining our market share and product leadership in blood collection systems and hoped they would support that objective." In 1985, BDVS was ASP's number-one supplier of blood collection products. It was estimated that all BD products accounted for about 10% of ASP's sales (making BD one of ASP's top suppliers) and that BDVS products accounted for about 25% of the BD products sold by ASP.

Other major distributors for BDVS were Curtin-Matheson Scientific (CMS), which had 20 warehouse locations and sold primarily to hospital labs, and Fisher Scientific, which had 20 warehouse locations and sold primarily to medical schools, research centers, and industrial labs.

In total, BDVS sold through six national distributors, with the remainder of its distribution network composed of regional chains and small local distributors. In most market areas, four or five different distributors sold BDVS products. One manager commented:

> Our relatively intensive distribution is a result of several factors. One is a legacy from when we were part of the BD division. Because BD sells syringes to a very fragmented physicians' market, intensive distribution is

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[5] "Hospital Suppliers Strike Back," The New York Times, March 31, 1985.

> important there, and we retain many distributors that began selling VACUTAINER products when we were not a separate division. Another factor is that established relationships between a small local distributor and a lab have traditionally been important in the blood collection products area. As a result, you sometimes must sell through a certain local distributor to break into an account.
>
> Also, since the DRG regulations, hospitals are more conscious of inventory carrying costs. As they cut stocking levels and order more frequently, some hospitals look more favorably on a supplier whose products are available from a number of different distributors in the area. If there is ever a problem with getting product from one distributor, the hospital knows there is back-up stock available at another in the area.

By contrast, Terumo sold its products primarily through ASP and CMS, the two largest national distributors. Terumo initially entered the U.S. market with needles in 1970 and tubes in 1972, selling through smaller West Coast distributors. In the mid-1970s, however, Terumo established a joint marketing agreement with Kimball Glass, one of ASP's major suppliers of lab products. Smith explained:

> Kimball opened the door for Terumo at ASP, which had been reluctant to take on an unknown line of blood collection products. ASP soon found, however, that Terumo's line provided them with an alternative to VACUTAINER. Terumo developed the relationship by focusing on individual ASP reps in individual branches: they worked closely with those reps to create a champion for their products in the branch.

Changing Buyer Behavior

During the 1980s, the distributor and end-user marketplace was changing significantly. According to a senior executive of one large national distributor of hospital supply products:

> In the past, our customer was the pathologist, chief technologist, or lab manager. This person's responsibility was to produce quality diagnostic tests on specimens brought into the lab and to do it as fast as possible. A key was to ensure that an adequate supply of products was on hand at all times. It was also the element that these people were least prepared to deal with. Most lab managers and chief technologists had risen to their positions on the basis of their clinical skills, not their purchasing skills. In addition, they didn't particularly enjoy the purchasing part of their jobs.
>
> Thus, they tended to do business with a representative they liked and trusted, and who had a product line that

> encompassed most of their needs. They also wanted a company that would manage most of the purchasing job for them.
>
> Major national distributors flourished in this environment, with the distributor-served portion of the market growing at 10% to 17% annually throughout the 1970s. Also, distributors generally paid little attention to costs, because customers primarily wanted service and were willing to pay for it. After all, the lab was a true profit center then: hospital reimbursement procedures allowed any increased operating expenses to be passed on to customers.
>
> Those days are gone. First, the customer is different. Buying influence has moved out of the lab in most hospitals. Most decisions on products purchased from distributors are now made by professional purchasing people, who require that traditional levels of service be provided along with lower costs. In addition, the buying influence is in many instances moving beyond the hospital purchasing department to the corporate purchasing department of national multihospital systems. Some distributors probably have over half of their total sales in these national accounts.
>
> Second, the distinction between manufacturers and distributors has become increasingly blurry. Currently, the three largest national distributors have manufacturing capabilities in important market segments such as hematology and therapeutic drug monitoring.
>
> Finally, while most distributors currently serve the hospital and commercial lab markets, little attention has been paid by distributors to the fastest growing customer segment, the physicians' market, which includes surgicenters, emergency centers, and diagnostic centers as well as the offices of individual doctors. All trends point toward more volume in these locations and less in the hospital.
>
> In this environment, distributors must lower costs. I believe many distributors will carry only two--or even one--vendors' brands in many product categories in exchange for lower prices from those vendors. Moreover, distributors can reduce inventory, transportation, and some administrative costs through consolidation of their product lines.

In the early 1980s, moreover, larger hospitals and buying groups began to favor single-source, high-volume contracts with manufacturers of certain products rather than purchase of these products through distributors. One industry observer noted in early 1985:

> The once popular prime vendor contract, one of the distributor's favorite marketing tools to hospitals, seems to be undergoing an eclipse. Materials managers who eagerly embraced the program's convenience now want to take back much

of the ordering and pricing responsibility they feel they have relinquished to the distributor. The new fashion is to use the purchasing power of committed volume to bargain down prices from individual manufacturers. . . . And to get the additional committed-volume business, manufacturers are perfectly willing to accept a portion of the distributor's responsibility, taking some of the cost of the product out of what was formerly the distributor's margin."[6]

Under direct buying contracts, a hospital or buying group negotiated a committed-volume contract directly with the manufacturer. The distributor would still deliver the product to the hospital for a commission from the manufacturer (and often in higher volumes than previously), but that distributor did not negotiate the initial purchase price directly with the hospital.

Further, by standardizing on purchases of certain products, buying groups could negotiate lower prices from the manufacturer and from the distributor: having negotiated a contract with a manufacturer, hospitals often held a second round of negotiations with distributors in order to lower their net purchase price further. The distributor, fearful of losing a big order, often relinquished a significant portion of the commission that the distributor received from the manufacturer. As one distributor manager commented, "With the stroke of a pen, these multihospital systems can swing millions of dollars in revenues from one distributor to another. Having experienced both sides of this double-edged sword, I know what the sports announcers mean when they talk about the 'thrill of victory' and the 'agony of defeat'!"

Exhibit 4 indicates the difference in purchasing patterns under prime vendor contracts and the more recent direct purchasing procedures.

BDVS Response

BDVS instituted a Z contract, in which prices and order quantities were negotiated directly with hospitals but still delivered through distributors. Often Z-contract prices with large buying groups were 30% to 40% lower than list prices. Under a Z contract, as with other BDVS contracts, BDVS's distributors received a set commission from BDVS for stocking, shipping, and billing the hospital.

One BDVS manager explained that "some hospitals negotiate with us and then shop among our distributors for the best price at that level of the chain. They force our distributors to compete away a portion of their commission on Z-contract orders." In response, BDVS offered its distributors periodic promotional cash incentives.

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[6] "The Devolution of Prime Vendor Contracts," In Vivo: The Business and Medicine Report, January-February 1985, p. 20.

With Z-contract customers, a BDVS sales rep called on the buyer 30 to 60 days before the contract expiration date to gather information about the customer's product requirements and any competitive inroads at the account. This information was entered on a Critical Information Questionnaire, which suggested a selling price and which the rep submitted to the regional manager. One sales rep estimated he spent 25% of his time on contract negotiations:

> Until recent years, only four or five of my accounts were on Z contracts, but now almost all are. That means more paperwork and legwork. It also means less time spent with the bench people and more time with purchasing people. I've also been spending more time in negotiating seminars, since these contract sessions can be difficult and tense. I've been in the business for nearly 15 years; selling in the health care industry is more complicated, and less fun, than it used to be.

By 1985, most BDVS venous blood collection products and approximately 20% of the division's capillary and microbiology products were sold through Z contracts. Many of BDVS's hospital customers were affiliated with several different buying groups, each of which had separate Z contracts with BDVS. While there were approximately one million hospital beds in the United States, Z contracts encompassed nearly 2.8 million hospital beds by 1985.

Affiliated Purchasing Group

Affiliated Purchasing Group (APG) was founded in 1975. A group of independent, not-for-profit hospitals were affiliated as shareholders with a central organization that provided various services for member hospitals, including purchasing programs. APG's motto was "In Unity There Is Strength," and the group sought to use the power of centralized purchasing while maintaining local autonomy among member hospitals.

APG headquarters personnel negotiated national purchasing agreements with suppliers, but member hospitals were free to make individual purchases separately with manufacturers or distributors of the products. APG purchasing staff monitored national and regional costs, and these data became the basis for their contract negotiations with manufacturers and distributors. The aim, according to one APG manager, was to "pay the lowest price available."

From a group of 20 hospitals in 1975, APG included more than 500 hospitals by 1985, accounting for more than 10% of all U.S. hospital beds and nearly 2 million annual admissions. Many large, prestigious hospitals affiliated with medical schools were APG members. In 1985, APG had national purchasing agreements with about 100 medical equipment suppliers, and the number of such agreements had grown consistently in recent years.

In addition to group purchasing, APG offered other services to member hospitals, especially for hospital administrative personnel. APG maintained a database on department administrators at APG-member hospitals, and this database was made available to APG hospitals seeking new managers. The intent was to offer administrators an opportunity to move among APG hospitals while retaining quality administrators within APG-affiliated hospitals. APG maintained a similar database on doctors. The group also coordinated a program that brought together doctors, nurses, and administrators from different APG-affiliated hospitals to discuss cost-reduction opportunities and develop specific action plans. The program allowed member hospitals to compare their costs by product line, therapy type, and department.

APG had been aggressive and innovative in other areas. It had recently established a private-label program in which it sought to have its suppliers use the APG trademark on products sold through APG purchasing agreements. By mid-1985, this private-label program encompassed a dozen product categories and APG expected to add 30 to 40 additional products by 1986. According to James Wilson, APG's vice president for materials management and the person who had initiated many of APG's recent programs, APG eventually hoped to private-label "virtually all" products sold through APG purchasing agreements.

In early 1985, Wilson also announced APG's intention of establishing its own distribution network. Throughout 1985, APG negotiated with a number of smaller, regional medical products distributors to provide warehousing, trucking, and related functions for hospitals that purchased under APG agreements. APG then sought to have its suppliers distribute their products to APG-affiliated distributors who, in return for a larger share of the high-volume APG contracts, distributed products for lower margins than hospital supply distributors had traditionally received.

Wilson announced that the program would eventually involve a national order-entry system linking these distributors with APG-affiliated hospitals. He expected that, if the system could achieve sufficient utilization by suppliers and APG member hospitals, it could lower the hospital's costs by 3% to 12% on most supply items.

By mid-1985, both the private-label and distribution programs were being aggressively promoted by APG materials management. Some manufacturers had agreed to participate in these programs, while others had rejected participation. BDVS's management knew of at least two manufacturers that had not been awarded APG contracts after rejecting participation in these programs. At the same time, distributors not part of the APG distribution network, including the large national distributors of hospital supply products, were reportedly ready to stop supporting (and perhaps sever agreements with) manufacturers that agreed to the program.

Negotiations with APG

In 1982, APG had first sought to standardize its purchase of needles and tubes and had demanded substantial price reductions from BDVS. BDVS had resisted negotiating prices and terms directly with APG headquarters and had continued dealing separately with individual hospitals. Then APG established a national purchasing agreement with Terumo. BDVS's field salespeople were able to retain most sales of BDVS tubes at individual APG-affiliated hospitals, in part by lowering prices when necessary on a hospital-by-hospital basis.

BDVS's success in retaining the business created a number of repercussions. One manager recalled:

> There was some ill will between us and APG for some time afterward. Their purchasing people had naturally worked hard to get the national contract in place and felt our success tended to undermine them with administration at member hospitals. In addition, the experience made the whole issue of compliance by member hospitals with national purchasing agreements more visible and important for them.

APG subsequently established a group of field personnel charged with promoting the importance of compliance with APG-negotiated contracts at member hospitals. In turn, BDVS field salespeople soon reported that their Z relationships with many accounts in the APG system seemed to be suffering. One salesperson noted:

> There was a period in which I couldn't get phone calls returned from people I had done business with for years. This was especially true of certain administrators who had introduced APG programs in their hospitals. The word on the street was that APG personnel were bad-mouthing us with their numbers. I don't think this appreciably affected my actual volume with individual departments in hospitals, but it certainly made life uncomfortable.

In response, BDVS managers sought to mend fences with certain administrators and with APG headquarters personnel. One manager recalled:

> We held meetings with these people in different regions and explained over dinner that our actions had been based on a reasonable business decision intended to retain our presence in those accounts and nothing personal had been intended. There is definitely an emotional dimension to business situations like this, and it's important to establish lines of communications with important individuals.

Following this series of meetings, BDVS field salespeople reported a "better atmosphere" at certain hospitals.

In April 1985, Wilson announced his intention of establishing a new national purchasing agreement for blood collection products. He asserted that the supplier awarded the contract would receive 90% of the business in these product lines from APG-affiliated hospitals. Informally, one APG manager also informed BDVS that APG considered the blood collection agreement to be a "showcase program in which a high degree of compliance by member hospitals is important to us: we'll work for that." BDVS management estimated that VACUTAINER products currently represented more than 80% of the venous blood collection tubes and 40% of the needles purchased by APG hospitals, totaling about $6 million in 1984 purchases from BDVS.

In contrast to 1982, BDVS management in 1985 decided to negotiate directly with APG headquarters. Management felt that the APG system had grown considerably during the past three years, the central purchasing organization had increased its strength with member hospitals, and there was more risk in refusing to negotiate. Kozy recalled:

> These meetings with APG in Chicago were tense. At the first meeting, they dramatically announced that 90% of their business was available to the vendor with the right price. We then surveyed our salesforce and, based on their contacts with users at APG affiliates, concluded that a substantial portion, but not 90%, of our business with these hospitals was at risk.
>
> At the next meeting, the APG manager pulled out a thick binder with the price of every item purchased by every member from every supplier. At the third meeting, out came another binder with their estimates of prices in our product category to all other hospital-buying groups in the United States. This is a difference from previous negotiations: they are very well prepared this time around.
>
> At a fourth meeting, they announced they had received bids from our competitors and wanted to know if we would meet their prices, which were considerably lower than our list prices and, because of the volume involved, lower than our prices on other Z-contract accounts.

Traditionally, BDVS products were sold through its authorized distributors to APG-affiliated hospitals as to other BDVS accounts. At the start of the new negotiations with APG, Kozy noted that:

> We told our distributors we were negotiating a potential contract with APG and that the negotiations had the potential to be bloody: if we lost the contract, we would be very aggressive in seeking to retain business at end-user accounts and wanted their support, even if the contract went to another supplier whose products they also distributed. Since then, our distributors, who do lots of business with APG-member hospitals, have sought ongoing information about developments.

The Guns of August

At the fifth meeting on August 1, Kozy and Smith proposed a Z contract with prices approximately 20% higher than competitors' proposals. The proposal required APG to deliver within 90 days of the initial contract date 95% of their member hospitals' purchases of venous blood collection tubes and 90% of their purchases of blood collection needles. If these targets were not achieved within 90 days, prices on BDVS products covered by the contract would automatically increase by 5% during the remaining 21 months of the proposed two-year contract agreement.

APG negotiators rejected this proposal and gave BDVS until August 15 to submit a new proposal. They also announced that they wanted all blood collection products covered by a national purchasing agreement to be part of the private-label program and thus carry the APG logo. They also wanted all products covered by the agreement to be supplied through distributors affiliated with APG, and they provided a list of these distributors. The list did not include most of BDVS's major distributors. According to the APG negotiators, moreover, BDVS's competitors had maintained their original pricing proposals and had agreed to both the private-label and distribution demands.

Exhibit 1

BECTON DICKINSON & COMPANY:
VACUTAINER Systems Division

Summary of Selected Financial Data
(years ending September 30)
(thousands of dollars, except per-share data)

Operations	1984	1983	1982
Net sales	$1,126,845	$1,119,520	$1,113,921
Gross profit	498,128	469,077	478,291
Gross profit margin	44.2%	41.9%	42.9%
Interest income	23,824	18,211	15,147
Interest expense	22,757	32,511	32,336
Income before income taxes[a]	92,908	33,652	106,198
Income tax provision (credit)	29,505	(2,278)	29,506
Net income	63,403	35,930	76,692

Financial Position	1984	1983	1982
Current assets	$ 565,526	$ 553,281	$ 557,242
Current liabilities	245,794	190,222	229,523
Current ratio	2.3	2.9	2.4
Pretax income as a percent of sales	8.2%	3.0%	9.5%
Net income as a percent of sales	5.6%	3.2%	6.9%
Return on net operating assets	8.2%	5.8%	10.6%
Return on equity	10.5%	6.1%	13.3%

Additional Data	1984	1983	1982
Capital expenditures	$ 82,324	$ 91,031	$ 130,008
Research and development expense	57,735	55,149	49,308
Number of employees	17,700	19,000	21,200

Summary by Business Segment

Health Care	1984	1983	1982
Medical product sales	$ 668,757	$ 685,275	$ 685,553
Laboratory product sales	260,828	264,234	266,425
Total health care sales	929,585	949,509	951,978
Segment operating income	108,178	100,069	130,342
Percentage of income to sales	11.6%	10.5%	13.7%

Industrial Safety	1984	1983	1982
Sales	$ 197,260	$ 170,011	$ 161,943
Segment operating income	22,635	4,616	15,839
Percentage of income to sales	11.5%	10.5%	13.7%

Source: Company annual reports

[a] 1983 income was significantly affected by a one-time nonrecurring charge.

Exhibit 2

BECTON DICKINSON & COMPANY:

VACUTAINER Systems Division

Blood Collection Systems Division

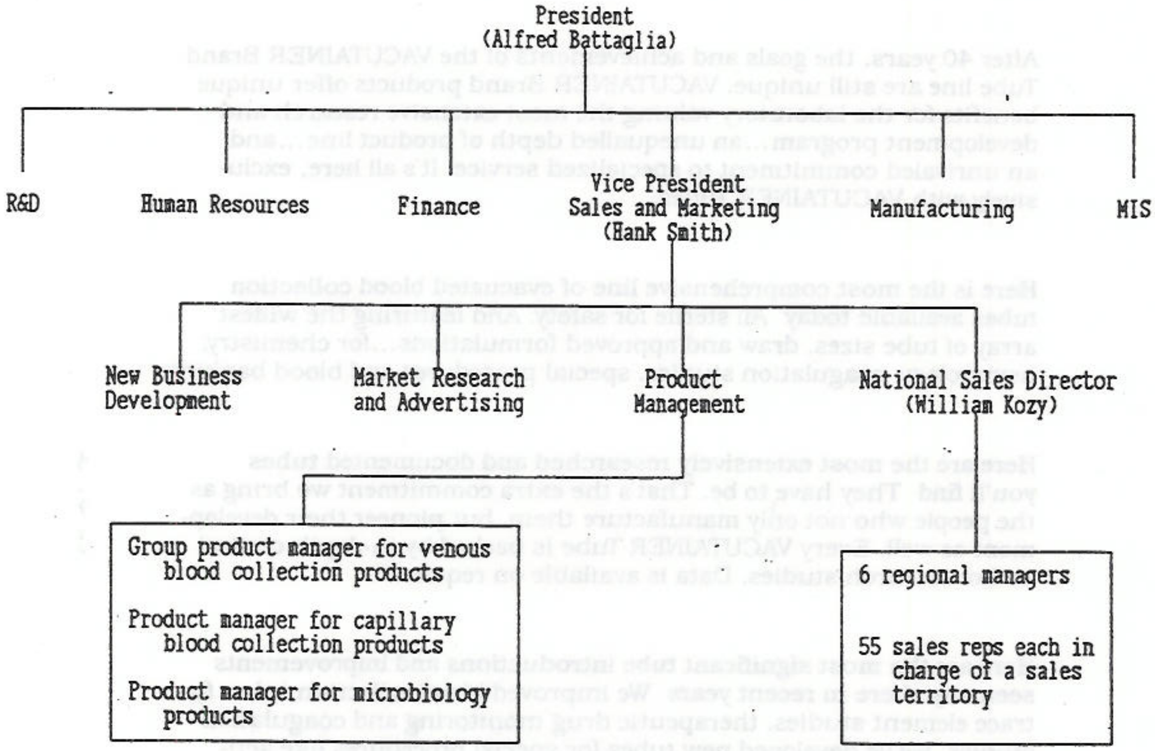

President
(Alfred Battaglia)
R&D
Human Resources
Finance
Vice President
Sales and Marketing
(Hank Smith)
Manufacturing
MIS
New Business
Development
Market Research
and Advertising
Product
Management
National Sales Director
(William Kozy)
Group product manager for venous
blood collection products
Product manager for capillary
blood collection products
Product manager for microbiology
products
6 regional managers
55 sales reps each in
charge of a sales
territory

Exhibit 3

BECTON DICKINSON & COMPANY

Sample Products

STERILE VACUTAINER BRAND EVACUATED TUBES

After 40 years, the goals and achievements of the VACUTAINER Brand Tube line are still unique. VACUTAINER Brand products offer unique benefits for the laboratory valuing the most extensive research and development program...an unequalled depth of product line...and an unrivaled commitment to specialized service. It's all here, exclusively with VACUTAINER Tubes.

Here is the most comprehensive line of evacuated blood collection tubes available today All sterile for safety. And featuring the widest array of tube sizes, draw and approved formulations...for chemistry, hematology, coagulation studies, special procedures and blood banking.

Here are the most extensively researched and documented tubes you'll find They have to be. That's the extra commitment we bring as the people who not only manufacture them, but pioneer their development as well. Every VACUTAINER Tube is backed by in-depth clinical and/or research studies. Data is available on request.

Here are the most significant tube introductions and improvements seen anywhere in recent years We improved blood collection tubes for trace element studies, therapeutic drug monitoring and coagulation studies. We've developed new tubes for special procedures like activated clotting time (ACT), LE cell preps and STAT tests. We've expanded our choice of tubes for serum preparation. Starting with our top-of-the-line SST™ (Serum Separator Tube with gel barrier material), we added our new CAT™ (Clot Activator Tube), and then improved our standard red-top tube with a new hemorepellent stopper. For laboratories that prefer their own labeling system, we now offer a new line of VACUTAINER Tubes with SeeThru labeling that provides all the essential information without impeding visibility of the specimen.

Here is the caliber of service support available only through VACUTAINER Systems...the company that stands behind every tube you use. Becton Dickinson VACUTAINER Systems is capable of meeting your special needs because we're not just a manufacturer, but researchers and originators ready to anticipate and respond to changes in your diagnostic procedures. Our sales representatives are accessible specialists in the laboratory field. Our nationwide distribution network is always ready to get you the supplies you need, when you need them. Our technical service team is available for immediate consultation (call toll free 800-631-0174). And, to help you train your staff for the best venous blood collection techniques, our educational materials—publications, films, and sound/slide programs—are at your disposal.

The following pages contain the latest information on our complete line of Sterile VACUTAINER Tubes and VACUTAINER Needles.

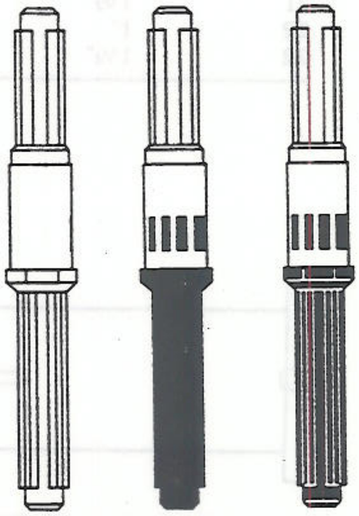
Exhibit 3 (continued)

VACUTAINER BRAND NEEDLES AND ACCESSORIES

The VACUTAINER System offers a wide selection of blood collection needles and accessories that meet both demanding technical requirements and patient needs during venipuncture. Sterile needles are available for single sample or multiple sample collection, with standard or thin-wall cannulae, in peel-apart packages or plastic cases, and in lengths and gauges you require.

Improved VACUTAINER Multiple Sample Needles feature the most up-to-date improvements for sharpness and ease of use. A new point configuration, special polishing and a new lubrication process allow extra smooth vein entry and reduce "drag." Laser inspection of *every needle* detects even microscopic flaws for virtually flawless quality control. All needle hubs and shields are color-coded for quick identification of gauge. New tamper-evident labels protect against inadvertent use of an already opened needle.

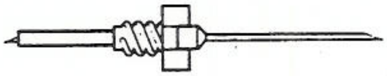
There is a VACUTAINER Holder/Needle Combination designed to fit any VACUTAINER Blood Collection Tube or VACUTAINER Culture Tube. Available with choice of single sample or multiple sample needles, with standard or small diameter holder. VACUTAINER Holder/Needle Combinations are sterile, single-use units that assure protection of the sterile pathway from patient to blood collection tube. Preassembled, they offer the additional advantage of eliminating assembly and clean-up time requirements. Also available are VACUTAINER Reusable Holders in three sizes to meet any need. And sterile, single-use Luer Adapters—unique to the VACUTAINER System—that allow the use of a variety of attachments (needle holders, catheters) under a single venipuncture, sparing the patient unnecessary trauma.



IMPROVED MULTIPLE SAMPLE NEEDLES in Plastic Package with Tamper-Evident Label

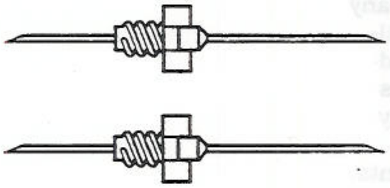
Gauge	Length	Cannula Wall	Color Code	Reorder Number
20	1"	regular	Yellow	7214
20	1½"	regular	Yellow	7215
21	1"	thin-wall	Green	7212
21	1½"	thin-wall	Green	7213
22	1"	thin-wall	Black	7210
22	1½"	thin-wall	Black	7211

Exhibit 3 (continued)



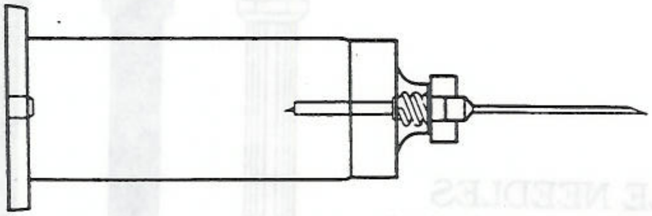
MULTIPLE SAMPLE NEEDLES, Peel-Apart Package

Gauge	Length	Cannula Wall	Color Code	Reorder Number
20	1″	regular	Yellow	7205
20	1 ½″	regular	Yellow	5749



SINGLE SAMPLE NEEDLES, Peel-Apart Package

Gauge	Length	Cannula Wall	Color Code	Reorder Number
18	1″	regular	Pink	5747
20	1″	regular	Yellow	5745
20	1 ½″	regular	Yellow	5746
21	1″	thin-wall	Green	5743
21	1 ½″	thin-wall	Green	5744
22	1″	regular	Black	5741
22	1 ½″	regular	Black	5742



MULTIPLE SAMPLE HOLDER/NEEDLE COMBINATION Peel-Apart Package

Holder Size	Needle Gauge	Needle Length	Color Code	Reorder Number
Standard	20	1 ½″	Yellow	7226
Small Diameter	22	1″	Black	7227

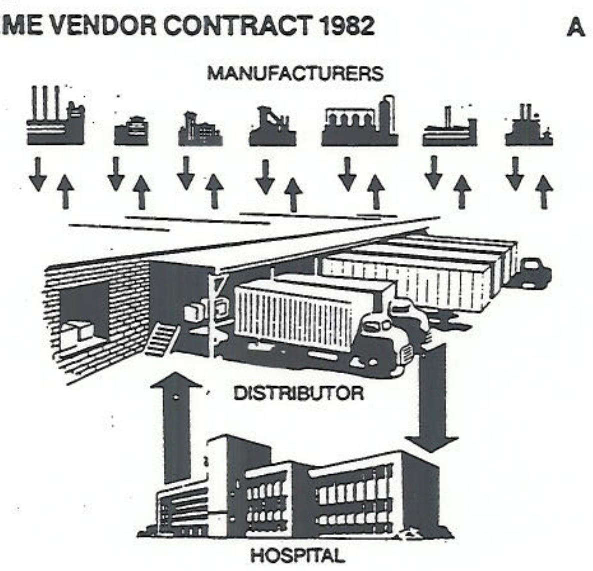
Exhibit 4

BECTON DICKINSON & COMPANY

Purchasing Patterns

Figure 1

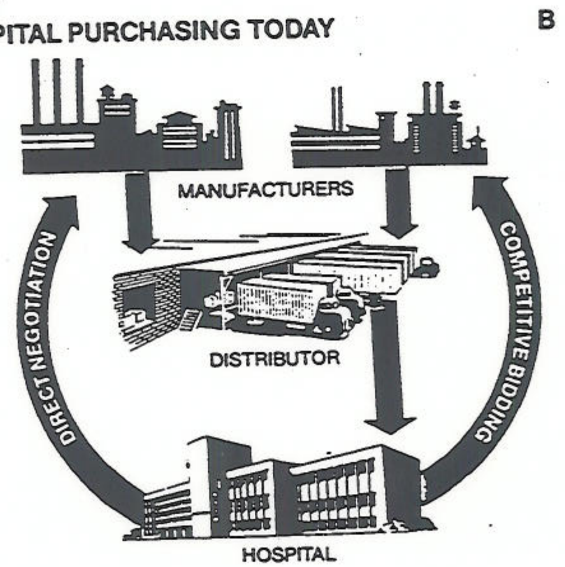
PRIME VENDOR CONTRACT 1982


A
MANUFACTURERS
DISTRIBUTOR
HOSPITAL

This figure illustrates the forces affecting prime vendor contracts and distributors. Under the older prime vendor contract (A), the distributor dealt more directly with many different suppliers, often negotiating the actual purchasing contracts for hospitals. As the suppliers' major conduit into the hospital, the distributor could drive a harder bargain. But as hospitals begin to cut back on the number of suppliers they deal with (B), standardizing their purchasing to increase buying power for their own direct negotiations with vendors, the distributor's role and power in the purchasing process are shrinking, as are the distributor's margins. The distributor becomes less the product broker and more of a product warehouser.

Figure 2

HOSPITAL PURCHASING TODAY


B
MANUFACTURERS
DIRECT NEGOTIATION
COMPETITIVE BIDDING
DISTRIBUTOR
HOSPITAL

Source: The Business and Medicine Report (January/February 1985), pp. 22-23.

13

WHARTON REPROGRAPHICS

Harvard Business School 577-112

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Deere & Company

Industrial Equipment Operations

This case was prepared by Associate Professor Benson P. Shapiro as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

In November 1976 Robert Gerstenberger, vice president for worldwide Industrial Equipment Operations at Deere & Co., was reviewing his unit's newly developed 1977 crawler tractor prices. Deere & Co. was about to introduce a bulldozer, the JD750, substantially larger than any it had previously produced. Gerstenberger was particularly concerned with the price of the JD750.[1]

Deere & Co. and Industrial Equipment Operations

Deere & Co. was among the world's leading manufacturers of farm and industrial equipment. Total sales for the year ending October 31, 1976 were $3.134 billion and net income was $216 million. Industrial equipment accounted for $452 million in sales, or 14% of the total. *Exhibit 1* shows selected financial data for Deere & Co. and the Industrial Equipment Operations, as well as some comparative data for Caterpillar Tractor Company.

Deere & Co. evolved from John Deere's invention of the steel plow in 1837. By the end of World War II Deere & Co. had a large business in tractors and farm implements, and it also had a strong reputation for reliability and engineering excellence in the farm

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[1] A *tractor* can be either wheeled or *crawler*—that is, running on an endless chain of tread so that it can move through mud or over rocks in the same manner as a military tank. A *bulldozer* is a crawler tractor with a flat blade for pushing dirt, sand, and so forth. A *loader* (or front-end loader) has a scoop on the front for pushing and lifting; it is often used for loading dump trucks.

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Rev. 12/85

community. It developed its industrial operation in five phases. The company entered the industrial equipment field (that is, equipment designed for industrial, construction, and forestry applications as opposed to agricultural applications) soon after World War II, when a small factory in Washington State converted standard agricultural wheeled tractors to crawler tractors to meet the requirements of orchard operators who needed low-profile tractors to operate among the trees. As farmers went into the logging business to supplement their agricultural operations, Deere crawler tractors began to be used in small forestry operations. Meanwhile, during this first phase of development, industrial operators—such as small contractors—began to use agricultural equipment in nonagricultural applications.

In the second phase, Deere developed industrially oriented attachments such as tractor-mounted backhoes, to supplement its agricultural equipment. As part of its evolution, Industrial Equipment Operations was organized in 1955 and staffed with engineers to develop a crawler tractor line designed for industrial application. In phase three, the newly developed crawler line and other product lines, each containing only one or two models, met with competitive success. By the early 1960s, Deere had perhaps a 20% to 30% share of the North American crawler tractor market where it operated against seven principal competitors. In the mid-1960s phase four evolved with the introduction of the JD350 and JD450 (described in its 1976 form in *Exhibit* 2), and later the JD550. As these items grew in popularity, the line gained a 50% to 60% share of the market for small (under 100 horsepower) crawlers in North America.

Phase five began in 1976 with the introduction of the JD750 bulldozer (described in *Exhibit* 3) and the JD755 crawler loader. These machines competed in the market for larger units used in the heavy construction (highways, dams, airports, etc.) and mining industries. Machines in these markets were referred to as productive machines because they were often required to work for 10 to 24 hours per day, as opposed to the smaller utility machines which were under less strain because their usage was more sporadic. The larger equipment market was dominated by the Caterpillar Tractor Co., with a crawler market share of about 45% worldwide. Caterpillar, or "Cat," became almost a generic term for large crawlers.

Other Deere industrial lines evolved like the crawler tractors. By late 1976 the Deere industrial line consisted of:

3 light crawler loaders
3 light bulldozers (JD350, 450, 550)
1 heavy crawler loader (JD755)
1 heavy bulldozer (JD750)
3 light-wheeled tractors with loaders, blades, and so forth, mounted on them
4 wheeled tractors with integral backhoes and loaders
2 heavy four-wheel-drive loaders
3 motor graders
3 scrapers
1 excavator

A variety of attachments and some specialized equipment for forestry and other applications (e.g., a sanitary landfill compactor)

Deere's major success had been in light crawler tractors. Case, another company with agricultural ancestry, had the major share (50%) of the North American light-wheeled industrial tractor market. Caterpillar dominated the markets for heavy construction and mining equipment. (It had worldwide construction and materials handling sales of $4.5 billion in 1975. Its domestic product line had about 60 items compared to about 40 for Deere.) Deere, however, had made substantial penetration into some of these markets, such as the one for motor graders. After introducing the articulated grader[2] in 1967, it gained 30% of the market for smaller graders—a market previously dominated by Caterpillar. Eighty percent of Deere's industrial sales were in the United States, compared to only about 43% of Caterpillar's.

Industrial Equipment Operations distributed its products through 433 dealers who operated a total of 437 outlets. These dealers were not the same as those who sold agricultural tractors—the industrial operation had its own dealer network. The dealers ranged in size from about $1 million to $16 million in sales, and they primarily offered only Deere products. In fact, 87% of the dealers' sales of new (not used) merchandise was in Deere industrial products. Related equipment and accessories of limited line producers were also sometimes offered. Industry sources believed that Deere had a distribution network that was second only to Caterpillar. Caterpillar, according to Deere estimates, had only 122 U.S. dealers with 219 outlets. Sales per dealer for Caterpillar ranged from about $12 million to about $70 million.

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[2] An articulated grader has a powered hinge in the middle that enables it to turn in an area much smaller than a standard grader and substantially increases the machine's productivity.

Deere had three different agreements with its dealers. Each covered one of the following: utility, construction, and forestry. Construction equipment, including the large crawler tractors, was sold by 275 dealers. While some Deere executives believed that ultimately it would be good to have dealers specialize by product line, most dealers had at least two agreements (could sell two lines) and many had three.

The typical Deere dealer had the following sales profile:

	% of Sales	*% Gross Margin*
New equipment	50	15–17
Parts	17	25–30
Service	8	(usually priced at twice direct labor cost, but varied)
Used equipment and accessories not purchased with equipment	25	(margins varied)

Deere granted 20% discounts from list price for construction equipment and 23% for utility equipment. It also offered a 4.5% volume discount that most dealers earned. Caterpillar offered a 20% discount. According to industry sources, Caterpillar dealers averaged 28% to 30% of their sales in parts because of: (1) the large stock of units in use; (2) their intensive use; and (3) the proportion of machines which were crawler tractors and required frequent replacement of undercarriage parts.

The Industrial Equipment Operations' sales force included 13 managers and 60 salespeople who called on dealers and major end users. It was expected that the advertising and promotion expenses for the JD750 introduction would be $300,000 over 14 months.

The Crawler Tractor Line

In 1976 the Deere crawler tractor line[3] included four tractors, each of which was the basis for both a bulldozer and a loader. *Exhibit 4* contains the prices, costs, and sizes of the four bulldozers, plus the JD850 bulldozer and JD855 loader whose introductions had already been scheduled. *Exhibit 5* shows the design evolution of the JD750/755, the 850/855, and competitive units.

The JD350 and 450 were very successfully introduced in the mid-1960s. The JD550—a modified version of the JD450—was added in 1975. These appealed to the utility market. The JD750 and 755 were about to be introduced to the construction market. The three smaller models were fairly standard design tractors, although each had features unique in the market. The JD350 was the only tractor of its size with a wet clutch, which provided better wear resistance than the standard dry clutch. The Caterpillar D-3, on the other hand, which was the most recent entrant in this market, had a dry clutch even though it was a 62-horsepower unit as opposed to 42-horsepower for the JD350 (and 65 for the JD450).

The JD750/755 was a truly unique product because it had a fully automatic dual-path hydrostatic drive that would also be offered on the JD850/855. This was part of a Deere strategy to enter a market by providing superior customer benefits based on technological innovation. The articulated grader mentioned earlier was another example of this policy. In that situation, Caterpillar had responded with an articulated design of its own in seven years. Deere's market share growth continued even after the Caterpillar entry.

A Deere bulletin on the hydrostatic transmission described it as follows:

> A hydrostatic drive converts mechanical engine power into high-pressure hydrostatic power and then back to mechanical power to propel a machine.
>
> A hydrostatic drive can be likened to a direct gear-drive transmission in that it has the capability to transmit mechanical power to the ground without power train slippage. The difference is that a hydrostatic drive delivers infinitely variable power and speed to match the changing demands of operating conditions.
>
> On the JD750 and JD755 Crawlers, mechanical engine power is carried by two drive shafts (Dual Path) to two reversible, variable-displacement hydrostatic pumps. The pumps convert the mechanical power to high-pressure hydrostatic power that drives two variable-displacement hydrostatic mo-

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[3] From this point on, except where noted, all data are for the North American market.

tors—one for each track. The motors convert the hydrostatic power back to mechanical power, which is then transmitted through the final drives to the sprockets and tracks to propel the machine.

The hydrostatic drive system provides infinitely variable travel speeds and tractive effort—forward and reverse—without the use of a conventional torque converter, Power Shift transmission, ring gear and pinion, steering clutches, and steering brakes.

Most important—the unique feature about the Dual-Path hydrostatic drive system used on the JD750 and JD755 is that it is **FULLY AUTOMATIC.**

The bulletin went on to describe the benefits:

> The new JD750 and JD755 have been designed to out-produce any other competitive-size crawler loader or bulldozer on the market today.
>
> Here's why:
>
> 1. You don't have to think about upshifting or downshifting during operation. The fully automatic Dual-Path hydrostatic drive does that for you—automatically and always at the optimum moment. You just set the speed control lever, and the machine takes care of the rest. Because you're free to concentrate on operating the loader or bulldozer, you can be more productive.
> 2. Independent, counterrotating tracks increase overall machine production because you can spot-turn either machine within its own length for better maneuverability in tight quarters.
> 3. Infinitely variable power to the tracks lets you make full-power turns under load. This simply means you have infinite control of speed and power for each track—from 0 to 6.5 miles per hour—forward or reverse. It also improves machine traction in unstable soils and increases maneuverability when you're backfilling or spreading material in and around buildings or other obstacles.
> 4. You don't have to adjust or replace steering clutches and steering brakes anymore. The JD750 and JD755 don't have any. Steering and braking are done hydrostatically. An automatic parking brake dynamically locks the machine into park when the engine is stopped.
> 5. 100 percent of engine power goes to propel the machine the moment equipment hydraulics are not in use. This means faster travel speeds and shorter cycle times. Conventional torque converter Power Shift crawlers generally offer no more than 85 to 90 percent of engine power for propel.

Deere executives believed that the transmission could lead to 10% to 15% higher productivity. Some field results showed it to be meeting Caterpillar D-6 results and surpassing the D-5.

The tractors were produced at Deere's Dubuque, Iowa industrial equipment plant. The three smaller ones were produced on one production line, while the JD750/755 were produced on a second. The JD850/855 would be produced on the JD750/755 line. Many of the 350 and 450 parts were common. The designers strove for commonality between the JD750/755 and the JD850/855, but because of size differences, there was a limit to the amount that could be achieved.

The loaders and bulldozers differed in mainframe design. Large ones differed particularly because of the high torque and strain introduced by the loader bucket, especially when it was high in the air. Each bulldozer/loader pair, however, shared most parts in common.

Factory costs, at standard operating rates, usually were 63% materials, 6% direct labor, 5% other variable, and 26% fixed. This cost distribution came about because many parts, especially on the larger units, were purchased from outsiders. Undercarriage parts—a major source of supplemental revenue—were purchased from a European vendor, and the hydrostatic transmissions were purchased domestically.

The investment in the JD750/755 and JD850/855 was gigantic. The engineering cost through the end of October 1976 was about $16 million, and the budget for the remainder of the work on the JD850/855 was $4 million. The capital expenditure for tooling and equipment was about $50 million. It took Deere almost 10 years from the original concept to engineer and tool the line. Tooling alone took three years. The largest piece of equipment in the factory, a $2 million machine to finish final drive assemblies, had to be ordered 28 months before installation. Thus, the JD850/855 designs had to be finalized three years before production, and on common and interrelated parts, three years before production of the JD750/755.

One engineering executive stated that heavy construction equipment was expensive to produce because it "required big, very precise pieces of metal which required heavy equipment to fabricate." He went on to say that the hydrostatic transmissions were "beyond the state of the art when we began to design them into the line. Our supplier had good experience in hydrostatic drives, particularly for machine tools, but neither it nor anyone else had done what we were about to do." The hydrostatic transmission supplier was not limited to selling only to Deere, and Deere had little patent protection on its line.

Crawler Tractor Customers

Crawler loaders and bulldozers were used by a wide variety of customers including landscapers, home builders, underground contractors (electrical, sewer, etc.), paving contractors, sanitary landfills, industrial plants, general contractors, mines, foresters, sugar cane plantations, and so on. In general, bulldozers were oriented to rural areas, while loaders were oriented to urban areas because of their industrial and hole-digging applications.

The large units were purchased by large contractors (who specialized in projects such as highways, dams, and airports) and by mines. They were used for much of the day and sometimes into the night. The purchasers were sophisticated and kept detailed records concerning productivity (tons moved per hour or per dollar) and reliability. They tended to purchase crawlers on the basis of parts availability, as well as on durability and reliability. Large contractors also purchased small machines. These utility machines, however, were not used quite as intensively as the larger units.

Most small units were purchased by small contractors. The small contractor was concerned primarily with reliability. It usually relied upon the local dealer for service, while the large contractor moved its equipment from one area to another and often had its own repair facility. The small contractor also was apparently much more sensitive to initial price than the larger contractor.

The very small customer was often an owner/operator who purchased on the basis of personal experience and attitude. Operator attitude had a good deal of effect, even for the medium-sized and larger contractor, because the operator had a major impact on productivity.

The large contractors tended to buy from a new supplier in small quantities to test a line, and then, if satisfied, to purchase in larger quantities. The large contractors had traditionally not been Deere customers, so the learning process was fairly long.

Some Deere executives believed that as very large projects such as the interstate road system and Alaska pipeline became fewer—especially domestically—the large contractors would become involved in smaller projects and change their mix of equipment toward smaller machines.

Crawler Tractor Competitors

The market for crawler tractors could best be divided into large (over 100 horsepower) and small. In 1976 about 8,500 small bulldozers (and about 6,500 small loaders) were sold in the United States. Deere had 50% to 60% of the small tractor market, according to Deere managers, because of high reliability, good engineering, and dealer strength with small contractors. International Harvester, which also produced farm equipment and trucks—especially heavy trucks—was ranked as number two, with perhaps 10% of the market. Case, which had the strongest competitive position in small industrial wheeled tractors, was number three. Caterpillar, which many years earlier had moved out of the small tractors in favor of heavy equipment, was probably number four. It reopened its interest in the market in 1973 when it introduced the D-3, a Caterpillar-engineered product made in Japan by a joint venture with Mitsubishi. According to industry sources, the D-3 had not been very successful. Some people thought it was because the Caterpillar dealer organization was already prosperous and oriented toward larger units.

In the large tractor market the situation was considerably different. Caterpillar led the market with a share of 50% to 60%. Its parts operation was viewed as excellent—superior to all competitors. Although some Deere managers praised their own as being almost equal, other Deere executives believed that to be an exaggeration. Number two was International Harvester. Other competitors included Case, Fiat-Allis (a joint venture of Fiat and Allis Chalmers), Komatsu, and the Terex division of General Motors. Komatsu was a Japanese manufacturer that copied Caterpillar designs, and in doing so brought the designs up to the existing state of the art—its strategy was to offer an equivalent product at a lower price. According to some Deere managers, this caused dealers and customers to wonder what was wrong with the product. In addition, Komatsu had apparently gone on the assumption that list prices were firm, while in fact dealers sometimes cut their markup on the large machines. Terex was viewed as a highly innovative competitor with little impact in the market.

Terex was known to be field testing a prototype bulldozer with a hydrostatic transmission. Some Deere engineers estimated that it would take Caterpillar five years to engineer and tool for a hydrostatic transmission. Others believed that Caterpillar would move much more quickly than that because its engineering operation was considerably bigger than Deere's, which had 700 people including 220 professionals in the industrial operation. In 1975 Caterpillar introduced reengineered versions of the D-7, D-8, and D-9 which were the largest bulldozers in its line. It was rumored to be experimenting with a truly gigantic D-10. Some Deere executives believed it was notable that Caterpillar had not reengineered the D-4, D-5, and D-6. The D-5 had the oldest design in the Caterpillar line. One Deere engineer believed that the D-6 was at the practical size limit for the hydrostatic transmission. Deere managers believed the D-5 and D-6 to be the bread and butter of the Caterpillar line because of the unit volume involved. Some believed the dealers liked the D-5 less than the D-6 because of its smaller size and consequently lower dollar gross margin.

Deere management estimated that the 1977 to 1980 domestic sales of JD750- and D-5-sized machines would be 5,500 per year; those of the JD850 and D-6 machines would be 3,500 per year.

The Price-Making Process at Deere

The price-making process for new products was very complex, and that for existing products quite complete. For a new product, the initial concept of a machine and its price could come from several sources, the most likely being the field sales organization, the product engineering group which reported to the Dubuque plant general manager, or an analytical staff group. The initial basis for the design was sketched out and, if reasonable, the process began in the market development department and product engineering. (See *Exhibit 6* for the organizational location of this and other relevant groups.) The engineers developed a rough cost estimate, and the market development people—given the product specifications—obtained price and volume forecasts from the four North American sales regions. One marketing development manager reported to each regional manager. Three product specialists in turn reported to the market development managers—one each for utility, construction, and forestry. The field and factory input was combined with that of the director of planning and administration for the industrial equipment operation. This material went to a corporate product council including top management, engineers, marketing people, and staff experts at both the corporate and group[4] levels. If the return on investment seemed acceptable and the product reasonable, it went into development as part of a five-year development plan which was reviewed annually with a new year added and the current year removed.

As the product neared the point of a decision regarding manufacturing commitment, the pricing process became more complete. Each year the market development manager gathered inputs from the corporate market economics group concerning gross economic forecasts (e.g., inflation), the field as previously described, and staff marketing groups. The market development group also performed competitive comparisons. That group, with the product engineering group, then submitted a proposal to the corporate pricing group. Corporate pricing elicited input from the director of planning and administration and developed a pricing proposal. The proposal was reviewed by the directors of manufacturing, marketing services, and sales, and then—after negotiation where necessary—it was passed on to Gerstenberger.

Regular price changes involved the corporate pricing group—which had specialists for both parts and whole products—the directors of planning and administration, manufacturing, marketing services, sales, and Gerstenberger, as well as their subordinates.

Pricing the Tractors

The primary issues in pricing the tractors involved the larger ones. The smaller ones were priced on an evolutionary basis with much emphasis on competition and past Deere prices.

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[4] The term group is used here to denote the three areas of corporate activity: agriculture, industrial, and consumer (garden tractors, snow blowers, etc.).

The usual procedure was to price a representative configuration—that is, a tractor with standard, popular features and options. From this, the other options and accessories were priced. Careful attention was paid to the cost/price ratios, which one executive defined as the figure of merit reflecting the quality of engineering, manufacturing, and marketing in the customer's view. Choosing the items to be in the representative configuration was a difficult task since it had major competitive impact. As *Exhibit 7* shows, different manufacturers considered different options and accessories standard. Prices had been reviewed every year, but since the inflation surge of the mid-1970s, they were reviewed every six months.

The larger tractors were much more controversial. One engineering executive suggested three possible product strategies which implied pricing strategies:

1. head-to-head with competition in horsepower, the product specification viewed as most important;
2. close to competition, but slightly under in horsepower; and
3. in between competitive units; if they have 150 and 200 horsepower units, we design to 175.

Another executive suggested a fourth alternative—coming in just above competition in horsepower. He believed that because product designs were more fixed than prices, if one had a slightly superior product one could vary the price over the life cycle of the product. During the introduction, therefore, one could keep the price at the competitive level but offer better performance, features, or utility to induce the customer to try the product. As market acceptance was gained, he argued, one could raise prices more rapidly than costs to reflect the improved reputation for quality and value. He went on to argue that the other strategies forced a reactive price posture, while his enabled a proactive one.

The JD750/755 had been designed to meet competition head on. The idea was to introduce a product of the same size, but to offer features that made it superior—primarily the hydrostatic transmission. With a parity price, it was thought, the features would overcome the buyer's reluctance to try a product new to the market. Deere managers believed that although the hydrostatic transmission was slightly more expensive to produce at the onset than a standard transmission, eventually it would be cheaper.

Gerstenberger believed that pricing was important for the success of the new JD750/755 and JD850/855, as well as for the continued success of the smaller models.

Pricing Accessories and Parts

As *Exhibits* 2 and 3 show, the tractors were offered with many accessories. Prices had to be developed for each of these. In general, industry practice was to attempt to obtain higher margins on accessories than on the tractors themselves. Where accessories were offered for use on only one tractor, the cost/price ratio of that tractor was the starting point for pricing. For accessories used on more than one tractor, the starting point was an average of the cost/price ratios of the tractors weighted by judgment. The competitive situation also affected pricing. Most of the analyses and recommendations for accessory pricing were done by the corporate pricing group's parts expert.

Parts were a very important part of the crawler tractor line. Because the undercarriage of the tractor was complex, carried a heavy load, experienced great stress, and was often suspended in sand or gravel, the tractor literally destroyed its own undercarriage parts. While it varied with soil conditions and usage, an industry rule of thumb stated that the average crawler needed 65% of its initial cost in service and parts during its first three years of operation. This percentage was even higher for units that worked more than one shift per day. An engineering executive stated that over a life of 10,000 operating hours, the average crawler used service and parts equivalent to 90% of its purchase price, and fuel equivalent to 35%.

Deere parts faced strong competition because the company purchased undercarriage parts for its assembly operation and competed with those parts in the aftermarket.[5] So-called "will-fitters" also manufactured parts, particularly undercarriage parts, for the aftermarket.[6] Industry sources believed that International Harvester and Case faced particularly intense will-fitter competition. Caterpillar, on the other hand, supposedly changed its parts frequently to make it difficult for will-fitters to copy them. The corporate parts-pricing expert was heavily involved with crawler parts pricing.

---

[5] Deere produced most of the undercarriage parts for its small tractors internally. Undercarriage parts were purchased in Europe for the large tractors.

[6] Will-fitters for undercarriage parts were all foreign. Some industry executives thought that the home countries of these companies provided various forms of subsidization to encourage export.

Parts were divided into three classifications: captive, competitive, and highly competitive. Captive parts were either manufactured in a Deere factory or purchased from an outside supplier. Most captive manufactured items were priced from steel schedules or casting schedules. These schedules took into account the kind of material and the amount that was used in making the part. They were scaled so that smaller parts returned a higher profit than larger pieces. The labor and overhead involved in manufacturing were also included in developing the suggested retail price. Competitive parts were generally those that were fast wearing; they could be either manufactured or purchased. Prices were developed on a cost basis or by following suggested list prices of competitive suppliers with national distribution. Highly competitive parts were priced on cost to meet many different competitors who might have sold exactly the same product.

Exhibit 1
Selected Financial Data

Deere & Company	1975		1976	
	($ millions)	*(%)*	*($ millions)*	*(%)*
Net sales	$2,955	100	$3,134	100
Cost of goods sold	2,273	77	2,316	74
Gross margin	682	23	818	26
Research and development	98	3	108	3
Selling, general, and administration	275	9	316	10
Income from operations (post-tax)	155	5	216	7
Worldwide sales by type of product ($ millions)				
Farm equipment	2,374		2,523	
Industrial equipment	412		452	
Consumer products	169		159	
	$2,955		$3,134	

Caterpillar Tractor Company	1975		Six months ended June 22, 1976 (unaudited)	
	($ millions)	*(%)*	*($ millions)*	*(%)*
Net sales	$4,964	100.0	$2,466	100.0
Cost of goods sold	3,859	77.7	1,875	76.0
Gross margin	1,105	22.3	591	24.0
Selling, general, and administration	451	9.1	234	9.5
Operating income (pre-tax)	654	13.2	357	14.5
These included the following research and engineering costs:	169	3.4	88	3.6
Of that, the following amounts were attributable to new product development and major improvements to present products:	$ 121	2.4	$ 61	2.5

Note: Data on Caterpillar Tractor Company were obtained from a prospectus dated October 28, 1976. Because of rounding, some numbers do not add or subtract correctly.

Exhibit 2
JD450-C/6405 Bulldozer

JOHN DEERE

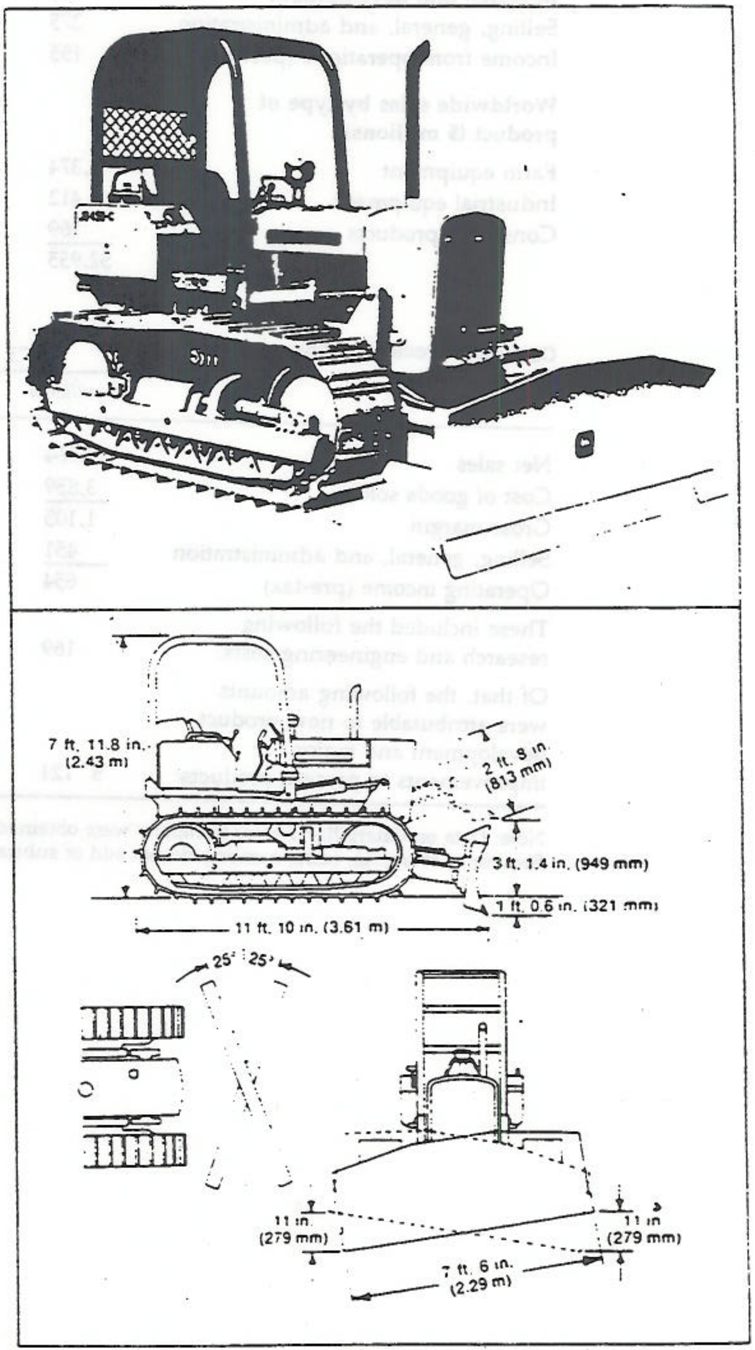
JD450-C/6405 BULLDOZER

FEATURES

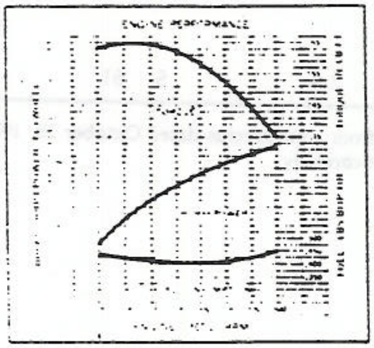
- 65 SAE net hp (66 PS)
- Single lever controls all dozer functions
- Power Shift Hi-Lo-Reverse
- Hydraulic track adjustment
- Sealed track rollers and idlers
- ▲Sealed track chain
- Self-adjusting, oil-cooled steering clutches and brakes
- Roll-over protective structure (ROPS)
- Vandal protection

ADD VERSATILITY WITH:

- Winch
- Fairlead and drawbar
- Backhoes
- Sideboom
- Integral log arch
- Ripper


450-C
7 ft. 11.8 in. (2.43 m)
2 ft. 8 in. (813 mm)
3 ft. 1.4 in. (949 mm)
1 ft. 0.6 in. (321 mm)
11 ft. 10 in. (3.61 m)
25°
25°
11 in. (279 mm)
11 in. (279 mm)
7 ft. 6 in. (2.29 m)

ENGINE PERFORMANCE



▲ Indicates change from last printing

Exhibit 2 (continued)

JD450-C/6405 BULLDOZER SPECIFICATIONS

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with IEMC and SAE Standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective structure and standard equipment.

Power (@ 2500 engine rpm):	SAE	
Gross	70 hp (52.2 kW*)	
Net	65 hp (48.5 kW)	66 PS
Drawbar	48.6 hp (36.2 kW)	49.3 PS

Net engine flywheel power is for an engine equipped with fan, air cleaner water pump, lubricating oil pump, fuel pump, alternator and muffler. The gross engine power is without fan. Flywheel power ratings are under SAE standard conditions of 500-ft altitude and 85° F temperature, and DIN 70 020 conditions (non-corrected). No derating is required up to 10,000 feet (3000 m) altitude.

*In the international system of units (SI) power is expressed in kilowatts (kW).

Engine: John Deere 4-cylinder diesel, 4-stroke cycle

Bore and stroke	4.02x4.33 in. (102x110 mm)
Piston displacement	219 cu. in. (3588 cm³)
Compression ratio	16.2 to 1
Maximum torque @ 1,400 rpm	164.5 lb-ft (22.74 kg-m)
NACC or AMA (U.S. Tax) horsepower	23.84
Lubrication	Pressure system w/full-flow filter
Main bearings	5
Cooling	Pressurized w/thermostat and fixed bypass
Fan	Blower
Air cleaner w/restriction indicator	Dry
Electrical system	12-volt w/alternator
Battery	Reserve capacity: 180 minutes

Transmission ...H-L-R: 4 speed ranges: with high, low and reverse speeds shifted hydraulically without clutching in each range.

Clutch ......11-in. (279mm) single-disk

Gear:	**Travel Speeds:** mph	km/h	**Max. Drawbar Pull:** (with adequate weight and traction) lb.	kg
Range 1				
Low	1.3	2.1	18,050	8188
High	1.8	2.9	12,600	5715
Reverse	1.7	2.7		
Range 2				
Low	2.0	3.2	10,050	4559
High	2.8	4.5	7,050	3197
Reverse	2.7	4.3		
Range 3				
Low	3.0	4.8	6,400	2903
High	4.3	6.9	4,250	1928
Reverse	4.1	6.6		
Range 4				
Low	4.7	7.6	3,500	1588
High	6.7	10.8	2,350	1066
Reverse	6.4	10.3		

Steering:
Steering clutches and brakes are controlled by a single lever for each track. A pedal provides braking, and lock-down for parking.
Clutches Oil-cooled, hydraulically-actuated, multiple-disk. 11-in. (279 mm) disks. 16 friction surfaces per clutch.
Brakes Self-adjusting, self-energizing, oil-cooled contracting band with bonded lining.

Hydraulic System: Open-Center

Control	Single "T-bar", triple hydraulic system
Pump	Gear, 15 or 23 gpm (57 or 87 l/min)
Pressure	1750 psi (123.0 kg/cm²)

Hydraulic Cylinders:	**Bore**	**Stroke**
Lift, two	3.5 in. (88.9 mm)	15 in. (381 mm)
Angle, two	3.5 in. (88.9 mm)	13.375 in. (342.9 mm)
Tilt, one	3.5 in. (88.9 mm)	3 in. (76.1 mm)

Cylinder rods ..Ground, heat-treated, chrome-plated, polished
Cylinder pivot pins ....Hardened steel (replaceable bushings)

Tracks (5-roller track frames w/rock guards):

Grouser	16-in. (406 mm)
Track shoes, each side	36
Ground contact area	2328 sq. in. (15 019 cm²)
Ground pressure	6.1 psi (0.429 kg/cm²)
Length of track on ground	72.75 in. (1.85 m)
Track gauge	52 in. (1.32 m)
Carrier roller	1
Adjustment	Hydraulic
Clearance at rear crossbar	14.25 in. (362 mm)

Blade: Reinforced, box-welded

Cutting edge	3-piece, reversible, replaceable
Center section	0.75 in. (19 mm)
End bits, cast steel	0.75 in. (19 mm)

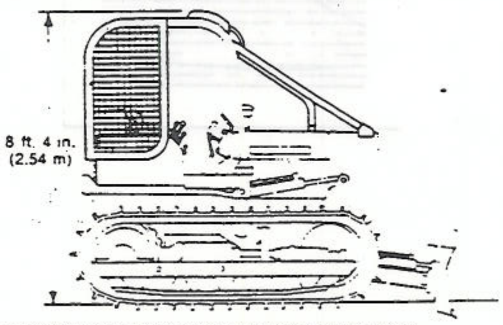
Capacities:	**U.S.**	**Liters**
Cooling system	4 gal.	15.1
Fuel tank	31 gal.	117.3
Crankcase, including filter	9 qt.	8.5
Transmission	8 gal.	30.3
▲Final drive (each)	6.5 qt.	6.2
Hydraulic reservoir	6.4 gal.	24.5
Hydraulic system	12.25 gal.	46.4
Steering clutch housing (each side)	14 qt.	13.2

Additional Standard Equipment:

Front/rear bottom guard
Front hitch
Lights
Trash-resistant radiator
Transistorized voltage regulator
Deluxe cushion seat w/armrests
Key switch w/pushbutton safety start
Precleaner
Electric hourmeter
Cigaret lighter
Vandal protection
Grease gun
Outer sprocket shields
▲Tachometer
▲Ether starting aid
▲Altitude compensator
▲ROPS w/canopy and seat belt

SAE Operating Weight ......14,250 lb. (6463 kg)

Special Equipment:
PTO (1000 rpm)
Upper and lower front idler shields
Two batteries
16-in. open-center grouser shoes
16-in. triple semi-grouser, open-center shoes
Auxiliary hydraulic system w/breakaway couplings
Swinging drawbar
Remote hydraulic cylinder
Cab (includes ROPS)
Winch drive

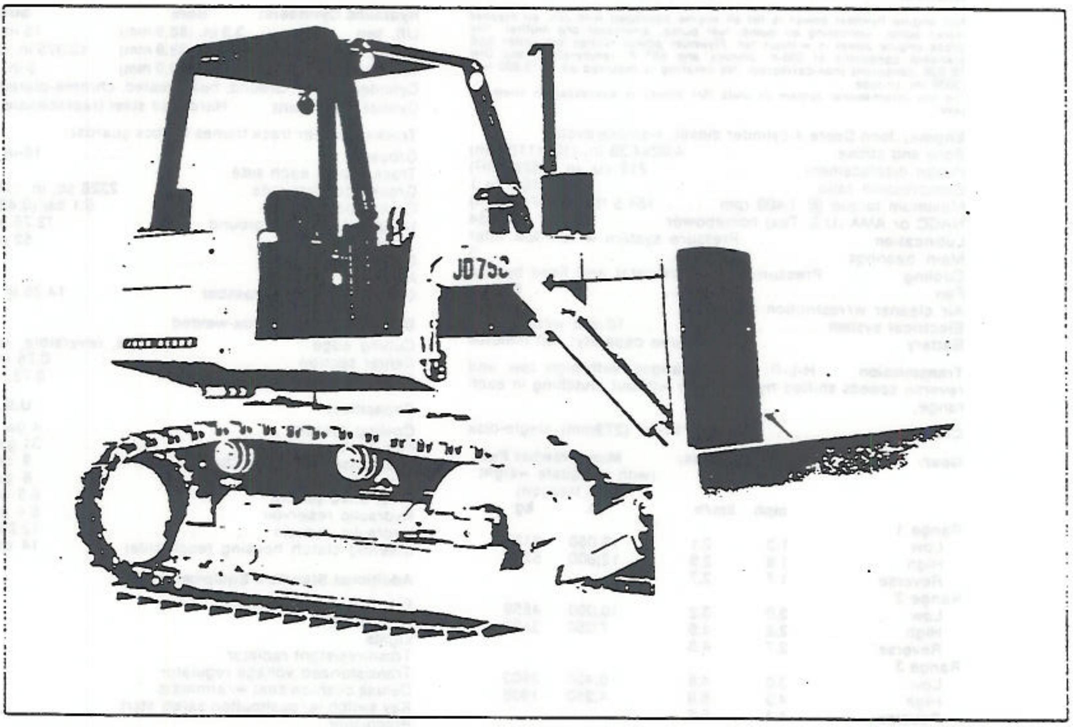


Limb risers and brush-protection assembly for roll-over protective structure

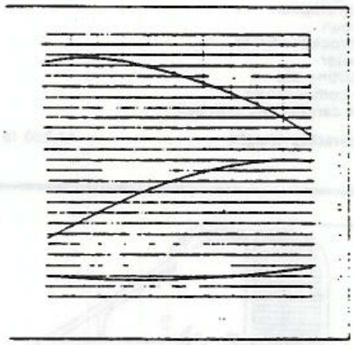
▲Indicates change from last printing.

Exhibit 3
JD750/6525 Bulldozer

JD750/6525 BULLDOZER



ENGINE PERFORMANCE



FEATURES

- **110 SAE net hp (111.5 PS)**
- **Dual-path automatic hydrostatic drive with infinite speeds up to 6.5 mph (10.5 km/h)**
- **Single lever for speed and direction control**
- **Levers or pedals for independent track control steering**
- **Counterrotating tracks**
- **No steering clutches or steering brakes**
- **Automatically engaged parking brake**
- **Sealed track rollers and idlers**
- **Sealed, counterbored track links and bushings**
- **Single-lever dozer control w/hydraulic tilt and blade float position**
- **Designed for quietness**
- **Roll-over protective structure (ROPS)**

ADD VERSATILITY WITH:

- **Winch**
- **Drawbar**
- **Ripper**

Exhibit 3 (continued)

JD750/6525 BULLDOZER SPECIFICATIONS

(Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, these specifications are based on a unit equipped with roll-over protective canopy, 18 in. (457 mm) grousers and standard equipment.

Power (@ 2100 rpm): **SAE**
Gross .... 122 hp (91 kW*)
Net .... 110 hp (82 kW) 111.5 PS

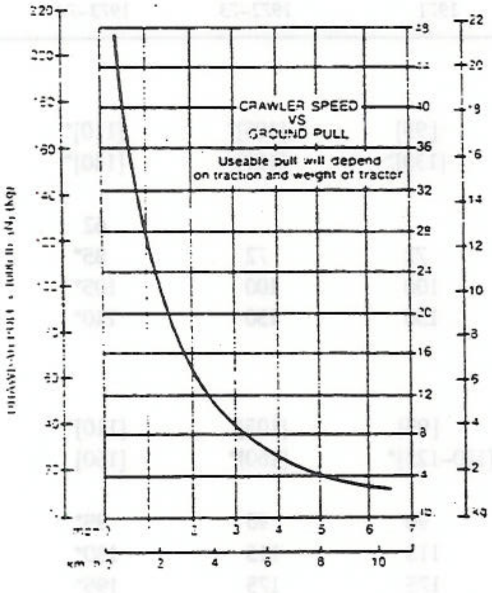
Net engine flywheel power is for an engine equipped with fan, air cleaner, water pump, lubricating oil pump, fuel pump, alternator and muffler. The gross engine power is without fan. Flywheel power ratings are under SAE standard conditions of 500-ft altitude and 85° F temperature, and DIN 70 020 conditions (non-corrected). No derating is required up to 10,000 feet (3000 m) altitude.

*In the International System of units (SI), power is expressed in kilowatts (kW).

Engine: John Deere 6-cylinder turbocharged diesel, valve-in-head, 4-stroke cycle.
Bore and stroke .... 4.19x5 in. (106.4x127 mm)
Piston displacement .... 414 cu. in. (6784 cm^3)
Compression ratio .... 16.2 to 1
Maximum torque @ 1300 rpm .. 345 lb-ft (468 Nm) (47.7 kg-m)
NACC or AMA (U.S. Tax) horsepower 42
Lubrication .... Pressure system w/ full flow filters
Main bearings 7
Cooling .... Pressurized w/ thermostat and controlled bypass
Fan .... Blower
Air cleaner w/ restriction indicator .... Dry
Electrical system .... 24 volt w/ alternator
Batteries (2 12 volt) .... Reserve capacity: 180 minutes each

Transmission:
Cold weather starting .... Disconnect clutch completely disengages hydrostatic drive and all hydraulics.
Splitter drive ...... Pressure-lubricated helical gears drive both hydrostatic transmissions, main hydraulic pump, winch drive shaft and auxiliary pump drive.
Drive .... Dual-path, fully automatic, infinitely variable hydrostatic transmissions.
Speeds .... Infinite from 0 to 6.5 mph (0 to 10.5 km/h) forward or reverse.
Control .. Single-lever, variable speed, forward and reverse.

Drawbar pull:
Maximum drawbar pull .. 47,500 lb. (213 kN) (21 550 kg) at 0 30 mph (0.48 km/h)



Steering:
Fully modulated infinitely variable lever steering for live power turns and counterrotation. Pedal steering optional. No need for steering clutches or steering brakes.

Brakes:
Service .... Hydrostatic
Parking .... Wet-disk brakes are automatically applied when engine is stopped, or manually applied with center foot pedal during normal operation.

Hydraulic System: Open-center
Control .... Single-lever, two-function control
Pump .... Vane, 46 gpm (174 l/min) @ rated engine speed
Pressure .... 2000 psi (137.9 bar) (140.6 kg/cm^2)

Hydraulic Cylinders:	**Bore**	**Stroke**
Lift, two	4.25 in. (108 mm)	31.85 in. (809 mm)
Tilt, one	5.5 in. (140 mm)	5.71 in. (145 mm)

Cylinder rods .... Ground, heat-treated, chrome-plated, polished
Cylinder pivot pins .... Hardened steel (replaceable bushings)

Tracks (6-roller track frame w/ front track guides and sprocket guard):
Grouser .... 18 in. (457 mm)
Track shoes, each side 40
Ground contact area .... 3240 sq. in. (20 903 cm^2)
Ground pressure .... 8.95 psi (0.617 bar) (0.629 kg/cm^2)
Length of track on ground .... 90 in. (2.29 m)
Track gauge .... 74 in. (1.88 m)
Oscillation .... 10 in. (254 mm)
Carrier rollers .... 2 each side
Adjustment .... Hydraulic
Minimum ground clearance .... 14 in. (356 mm)

Blade:
Cutting edge .... 3-piece, replaceable
Center section .... 0.75 in. (19 mm)
End bits, boron steel .... 0.75 in. (19 mm)

Capacities:	**U.S.**	**Liters**
Cooling system	7 gal.	26.5
Fuel tank	73 gal.	276.3
Crankcase	18 qt.	17.0
Crankcase, including filter	20 qt.	15.9
Splitter drive	1.5 gal.	5.7
Final drive, each: 1st reduction	8.5 gal	32.2
2nd reduction	3.5 gal.	13.2
Hydraulic system	33 gal.	124.9
Hydrostatic drives	33 gal.	124.9

Additional Standard Equipment:
Enclosed alternator w/ solid state regulator
Bottom guards
Cushioned seat w/ armrests
Key switch
Pushbutton starting
Electric hourmeter
Cigaret lighter
Vandal protection
Muffler
Ether starting aid
Front idler shields
Master electrical disconnect switch
Toolbox
Transmission neutral lock with starter safety switch
Horn
Air cleaner restriction indicator
ROPS canopy w/ seat belt

SAE Operating Weight w/ROPS .... 28,985 lb. (13 148 kg)

Exhibit 4
The Deere Crawler Tractor Line

	List Price	Net Price[a]	Cost[b]	Cost/Price Ratio[c]	Net Horsepower	Weight (in pounds)
JD350-C Bulldozer	$20,923	$15,169	$11,377	75%	42	10,600
JD350-C Loader[d]					42	12,400
JD450-C Bulldozer	29,854	21,644	14,068	65	65	14,250
JD450-C Loader					65	16,700
JD550 Bulldozer	33,336	24,169	16,919	70	72	15,510
JD555 Loader					72	18,255
JD750 Bulldozer	59,785	45,138	36,110	80	110	28,985
JD755 Loader					110	32,000
JD850 Bulldozer[e]			40,717		140	36,140
JD855 Loader					190	46,060

Note: All confidential company data have been disguised. Price, cost, and weight are for the representative configuration, the standard configuration of popular choices and options used for pricing purposes. For the three smaller bulldozers, a popular blade, not used in the representative configuration, was included here for simplicity.

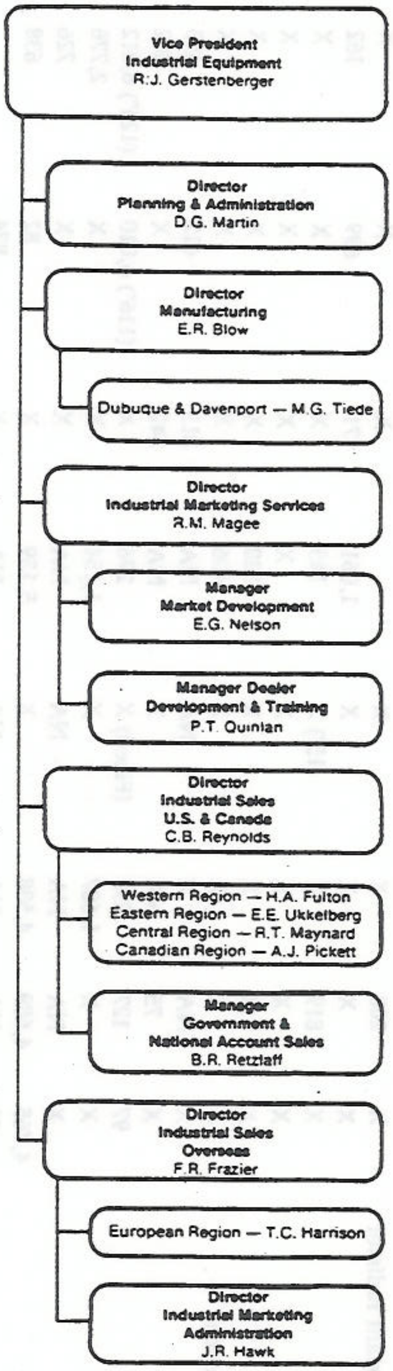
a. Net price is list price minus the 23% discount and the 4.5% volume discount for utility tractors. For the JD750 it is list price minus the 20% discount and the 4.5% volume discount.
b. Costs are factory standard cost.
c. The cost/price ratio is cost divided by net price.
d. Loaders are listed to show the total line. Price and cost data were deleted for simplicity.
e. The JD850 and 855 were due to be introduced in May 1977 and January 1978, respectively. Thus, costs and weights are estimated.

Exhibit 5
Evolving Horsepower of the 750/755, 850/855, and Competitors

Type of Equipment	*1970*	*1971*	*1972–73*	*1973–74*	*1975–76*
Bulldozers					
Deere					
750	[95]	[95]	[105]*	[110]*	110
850	[140]	[130]*	[130]	[140]*	[140]
Caterpillar					
D-3				62	62
D-4	72	72	72	85*	85
D-5	100	100	100	105*	105
D-6	130	130	130	140*	140
Loaders					
Deere					
755	[95]	[95]	[105]*	[110]*	110
855	[130]	[120–125]*	[160]*	[160]	[190]*
Caterpillar					
951	90	90	90	95*	95
955	115	115	115	130*	130
977	175	175	175	195*	195

Note: Numbers stand for net horsepower. Brackets [ ] indicate a planned but not marketed model. Asterisks * indicate a change from previous year.

Exhibit 6
Location of People Relevant to Pricing


Vice President
Industrial Equipment
R.J. Gerstenberger
Director
Planning & Administration
D.G. Martin
Director
Manufacturing
E.R. Blow
Dubuque & Davenport — M.G. Tiede
Director
Industrial Marketing Services
R.M. Magee
Manager
Market Development
E.G. Nelson
Manager Dealer
Development & Training
P.T. Quinlan
Director
Industrial Sales
U.S. & Canada
C.B. Reynolds
Western Region — H.A. Fulton
Eastern Region — E.E. Ukkelberg
Central Region — R.T. Maynard
Canadian Region — A.J. Pickett
Manager
Government &
National Account Sales
B.R. Retzlaff
Director
Industrial Sales
Overseas
F.R. Frazier
European Region — T.C. Harrison
Director
Industrial Marketing
Administration
J.R. Hawk

Note: The corporate director of pricing reported to the corporate senior vice president responsible for finance. The corporate director of market economics reported to the vice president for corporate planning, who in turn reported to the corporate senior vice president responsible for staff activities. Product engineering reported to the Dubuque plant general manager.

Exhibit 7
Competitive Crawler-Dozer Price Comparisons

	JD450-C	*Case 450*	*M.F. 300*	*I.H. TD7E (Stand.)*	*Cat D-3*	*JD750*	*Case 1150B*	*Cat D-5*	*F.A. 10-B*
Crawler—diesel	$24,992	$24,816	$30,651	$32,802	$20,960	$59,059	$45,343	$48,422	$57,184
Power shift transmission	X	X	X	X	X	X	(Powershift) X	(Powershift) X	(Powershift) X
Engine side shields	X	121	X	X	143	X	X	X	X
Blower fan with trash-resistant radiator	X	208	X	X		X	X	X	X
Triple hydraulic system	X	X	X	X	1,061	71	699	162	(19 3/4") X
16" grousers[a]	X	819	X	(15") X	145	X	X	X	X
90 AMP battery	X	X	X	X	X	X	X	X	X
Lights	X	X	X	X	130	X	X	X	1,407
Rear bottom guard for drawbar	X	X	X	X	406	X	X	X	X
Tachometer	X	NA	X	NA	NA[a]	313	412	453	X
Ether starting aid	X	75	NA	X	NA	342	X	402	X
Swinging drawbar	97	127	293	(Fixed) X	276	X	(116") 6,010	(124") 6,812	(113 3/8") X
ROPS canopy[b]	X	X	1,607	X	1,154	X	X	2,776	X
Altitude compensator	X	NA	NA	NA	NA	X	X	726	X
90" inside hydraulic dozer	4,765	4,689	4,538	X	5,139	X	82	638	X
Winch drive	72	NA	NA	NA	NA	X	874		X
Track rock guards	X	X	X	X	443	X	132	306	Parts
Decelerator	X	NA	X	X	93	X	159	232	X
Front hitch	X	35	X	X	47	X	148	NA	Parts
Vandal protection	X	133	X	X	96	X	44	188	Parts
Horn	X	NA	NA	NA	53	X	550	NA	NA
Total price	$29,926	$31,023	$37,089	$32,802	$30,146	$59,785	$54,453	$61,117	$58,591
Price book date	11/1/76	8/1/76	4/1/76	10/18/76	8/28/76	11/1/76	8/1/76	8/28/76	6/1/76
Net horsepower	65	51	63	65	62	110	105	105	110
Price/Horsepower	$460	$608	$589	$505	$486	$544	$519	$582	$533

Note: All data are disguised. M.F. is Massey Ferguson, I.H. is International Harvester, and F.A. is Fiat-Allis. X means item is included in base price. NA means item is not available.

a. Grousers are to crawlers what tire chains are to tires; they aid in traction.

b. ROPS: rollover protection system

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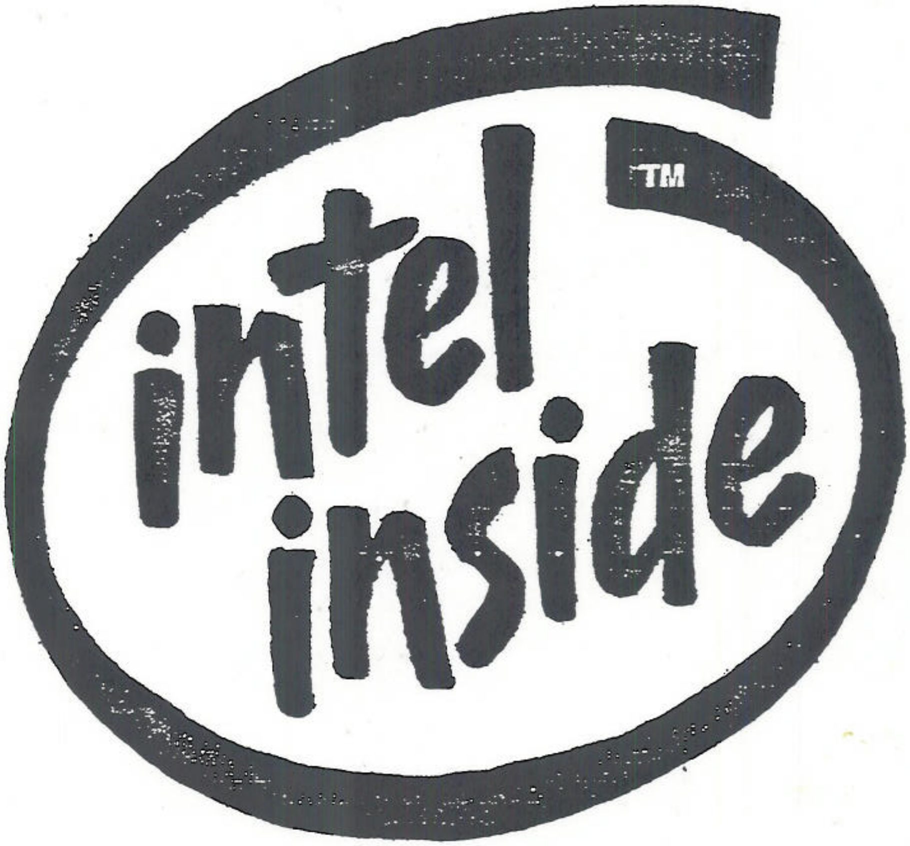
WHARTON REPROGRAPHICS



$ 1.35

09/95-4422

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Financial support for this case was provided by INSEAD's Management of Technology and Innovation programme.

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> "We have been investing in differentiating our own PCs in the market place and Intel's campaign is levelling the playing field."

Jon Brown, Senior Manager at Intel's European headquarters, read his copy of Business Week with disappointment. It was already November 1991, the "Intel Inside" campaign was four months old, and Compaq Computer Corp. was still saying "no!" Compaq was one of Intel's biggest customers and the magazine was quoting from an interview with Kevin Bohren, a Compaq VP in the US.

Brown was facing mixed receptions himself. Some European OEMs embraced the "Intel Inside" program, others were waiting for their U.S. or Japan headquarters to decide and the rest were reluctant to negative.

Intel Inside

The "Intel Inside" campaign was Intel's attempt, Brown's boss, Director Dennis Cole characterized it, to "... cut the utter confusion clones bring to the marketplace and to drive the premium brand message home to the PC buyer". The campaign included cooperative advertising and merchandising activities, launched as a response to the loss in a Federal U.S. court of a law suit against Advanced Micro Devices. AMD was using the "386" designation in naming its new microprocessor clones after Intel's own "386".

Intel had a high stake in the success of its "Intel Inside" campaign, since it now had no legal proprietorship to the x86 series of names, with which buyers were already familiar. With cloning practices running rampant, a stream of other Intel innovations was in danger of remaining "anonymous", hidden behind the reputation of Original Equipment Manufacturers (OEMs), thus becoming "commodities" when competitors caught up.

Associated Press had run a story on the Financial Wire saying:

> "Intel wants to be the Nutrasweet of sweeteners, the Dolby of sound and the Teflon of frying pans... but analysts call the costly high-tech campaign a gamble... I think it's money down the drain because [computer] manufacturers don't think Intel gives them greater selling advantages," said Michael Murphy, editor of the California Technology Newsletter... "The public, unfortunately, is either too unsophisticated to listen, or it listens to what trade journals say, not ads."... .

San Jose Mercury, Silicon Valley's local newspaper also wrote:

> Calling it a "desperation move," Drew Peck of Donaldson, Lufkin & Jenrette Securities Corp. in New York said, "Chip companies were supposed to compete on technological excellence and not on advertising campaigns. That's an awful lot more money to spend. I can't believe this is going to degrade into a Coke and Pepsi war". But others said this was a sign that buyers were becoming more sophisticated and that a new era of high-technology marketing was coming. "For a technology company to now talk marketing, that's really a change," said Patricia Galligan, an analyst with the San Jose market research firm Dataquest Inc. "This is incredible!"

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However, AMD spokesman John Greenagel said that his company would not follow Intel's lead:

> "Our customers aren't interested in promoting a product that has value added by somebody else's components, and all the advertising in the world won't make up for having an inferior product."

Brown was not completely discouraged. The same Business Week article also quoted the Chairman of Northgate Computer Systems, saying, "You offer an Intel and an AMD side by side, and the customer won't abide the AMD". Northgate had recently shipped several computers, which by accident contained AMD chips, to a corporate buyer. The customer was furious and sent them back for Intel machines.

Intel Corporation[1]

Intel was founded in 1968 by Robert Noyce and Gordon Moore, both pioneers in the semiconductor industry at Fairchild Semiconductor. The initial goal of the company was to develop memory products based on semiconductor technology. In 1969, Intel introduced a 256-bit static random access memory (SRAM); this was followed in 1970 by the first 1k dynamic random access memory (DRAM). By 1972, Intel's DRAM was the largest selling semiconductor memory product in the world. Intel's leadership in technology was firmly established after it invented the world's first microprocessor and erasable-programmable read-only-memory (EPROM). According to one industry observer, Intel invented 16 of the 22 major breakthroughs in microelectronics between 1971 and 1981 (see Exhibit 1).

After more than a decade of almost continuous prosperity, the bottom line started to suffer in 1981. Intel's strategy during the 1970's had been to withdraw from the product segments as they became mature and commodity-like. This worked as long as Intel could develop revolutionary products every few years. In the early 1980s, however, Intel's revolutionary breakthroughs slowed, and the company made some mistakes. For instance, after failing several times to produce a workable 256K DRAM design, Intel fell so far behind that it had to withdraw from the DRAM market. In 1982, IBM, Intel's largest customer, bought a 20 % stake in the company to help insure its survival. Despite the capital infusion, the pruning of product lines resulted in sales peaking in 1984; and between 1985 and early 1987, the company retrenched as the global semiconductor industry experienced its worst depression in 40 years.

Intel produced logic products such as microprocessors, microcontrollers, microprocessor peripherals such as graphics coprocessors and numerics coprocessors, and ASIC products. The company also produced memory components such as SRAMs, and EPSOMS, and systems of integrated components.

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[1] This section was taken from the Harvard Business School case "Intel Corporation 1987" (9-388-051) by Professor David B. Yoffie with the assistance of Alvin G. Wint. Exhibit 2 presents financial summary 1982-1991.

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Microprocessors. Since inventing the microprocessor in 1971, Intel was the industry leader in microprocessor technology. The company's products established an industry standard, in no small part due to the most significant design win in the company's history: IBM chose an Intel 16-bit microprocessor - the 8086, for its IBM PC in 1980 and announced it in 1981. Later, in 1984, Intel's 16-bit 80286 microprocessor was the "engine" chosen to run the IBM AT personal computer. IBM also chose Intel's 32-bit 80386 microprocessor for its top line System 2 personal computers, announced in early 1987.

Although National Semiconductor, Motorola, and AT&T all came out with 32-bit microprocessors up to two years before Intel, the 386 was among the most advanced microprocessors on the market in 1987. Produced over a four-year period, at a cost of over $100 million, the 386 tapped into a broadest software base of any existing 32-bit microprocessor. A member of the 86 Architectural family, the 386 ran all the software generated for Intel's 8- and 16-bit microprocessors, which had an installed software base of $10 billion worth of programs by 1987. The 386 also ran simultaneously application programs written for different operating systems; the 386 could run MS-DOS and UNIX (AT&T's operating system) at the same time. The company hoped that these features of the 386 would help the microprocessor capture a large share of the 32-bit market, which was estimated to total more than $1 billion by 1990.

Intel's products were categorized as Desktop Market Products, Portable Market Products, Multimedia and Supercomputing Products, Embedded Control and Memory Products, Automotive and Military Products and Microcomputer Products. The x86 product line was part of the Desktop division of products, with the exception of the Intel 386SL microprocessor which was designed to work on low power and was sold as a Portable Market product. Major products in other groups included the 32-bit 1960 family of processors, 16-bit and 32-bit controllers, EPROMS, DRAMs and other software and peripherals products.

Most of Intel's products were used by OEMs and distributors as building blocks to construct computers systems. For any manufacturer of computer and systems components, corporate capabilities in the areas of software, product architecture, basic technologies and service and support were very important in serving customers. Intel's success was due to its strong capabilities in all of the above areas.

Analysts in the computer industry agreed that a new generation of microprocessors appear about every three years This was true for the development of the x86 series and helped explain the fast and fierce competition between chip manufacturers. Up until 1991, the 286 microprocessor market was growing. Then, sales of 386SX chips grew 41% while the 286 market volume fell by 60%. Industry experts expected the 386 chip to "run out of steam by 1993," replaced by the more powerful 486 series, and others which in turn would be represented by others in due time (see exhibit 3).

In 1992, Intel was the world leader for microprocessors used in personal computers, with a market share of approximately 80%. Until the introduction of a clone 386 chip by the competition, Intel had a 100% market share for the 386 series microprocessors. Intel was the sole producer of the newest 486 series chip in 1992.

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Intel and AMD[2]

Advanced Micro Devices' (AMD) office building was just down the road from Intel's new offices in Santa Clara, California. The relationship between Intel and AMD dated back to 1976, when the two companies signed a patent cross license which allowed each party to use the other's patents. This agreement also provided a copyright license for AMD to "copy micro codes contained in Intel microcomputers..." This agreement generally allowed each party to use the other's patents, which included the right to second source the other party's products. This agreement terminated in 1981.

In 1977 Intel and AMD signed a technology exchange agreement for specific product, and in 1982 a they signed a technology exchange agreement which provided the opportunity to exchange a large number of products based on a barter system. Under this system, either party would obtain credits for products that were transferred to the other party. As part of the 1982 agreement, the parties revived and extended the 1976 patent cross license to December 31 1995. This agreement was amended in 1984, revoking licenses to ICE circuitry.

In 1987 Products were not being exchanged under the 1982 technology agreement. Intel believed that AMD was not developing good products for transfer under the agreement, and AMD believed that Intel was too picky in selecting AMD products. A five year arbitration brought by AMD began then. One of the ultimate results of the arbitration was that the arbitrator ruled the AMD did not earn the right to obtain 386 technology under the 1982 agreement. However, the arbitrator also believed that Intel breached the duty of good faith and fair dealing under the agreement, and awarded AMD certain intellectual property licenses on the 386. This award was subsequently thrown out by the court of appeals , and was later considered by the California Supreme Court.

In 1990 AMD copied the micro code in the 386, and subsequently the 486 microprocessor and claimed they were licensed to do so under the 1976 license agreement to copy micrododes in microcomputers. The first jury found that the word "microcomputer: really meant "microcomputer," like a personal computer, as opposed to "microprocessor," and consequently AMD had no license to copy Intel micro codes in microprocessors. The judge ordered a retrial, and the second jury ruled that the word "microcomputer: meant " microprocessor." Consequently, AMD was allowed to copy the micro code in Intel microprocessors like the 386 and 486. Intel expected to appeal this second ruling.

In 1991 AMD filed an antitrust suit in federal court, which was later closed, after investigation, by the Federal Trade Commission gave AMD the right to copy Intel's micro code for its microprocessors. Micro code was the code for the structure of micro transistors building up the microprocessor's performance (see exhibit 4). Intel licensed to AMD as a "second source" to manufacture its microprocessors, since its clients insisted on having alternative sources of supply.

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[2] The litigation part of this section was provided by Intel Corporation, the casewriter does not accept any responsibility for any error or imprecision there.

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Intel subsequently responded to the competitive threat to AMD and others by: (1) announcing price cuts of up to 35 % on some of its microprocessors, (2) spending heavily in research, (3) publicizing the large scale of Intel R & D spending, and (4) aggressively promoting its 486 microprocessor, of which Intel was the sole manufacturer (see exhibit 5).

Intel Inside

In its most dramatic move to counter the threat to its leadership position in the microprocessor industry, Intel resorted in 1992 to launch a world wide brand advertising campaign to establish awareness of Intel among end users, and build brand equity into the logo: "Intel Inside". This activity aimed directly at computer buyers in order to "educate consumers and give them something predictable". By direct advertising to computer users, Intel hoped to build brand awareness and loyalty, and thereby brand equity.

The idea for the "Intel Inside" icon had originated in Japan, where computer manufacturers had begun to use the encircled words "Intel in it" to indicate on their advertisements that they had Intel components in them (see exhibit 6) . The microprocessor was recognized by professional PC buyers and enthusiasts as the most critical component of the PC and the logo would have the effect of reassuring PC buyers of the quality of the components used by the PC OEM. This concept developed into the "Intel Inside" logo which had the appearance of a scribbled note to a colleague or friend appearing on the ads of computer manufacturers. The logo further stood out due to the design and the noisy colours. Intel focused the campaign on products containing its 32-bit (386 or 486) microprocessors.

The Intel Inside campaign included advertising in computer magazines and business publications, on television, and on billboards in some major metropolitan areas. One of the campaign's important features was the Partnership Marketing Program with OEMS. It was open to any OEM that produced or integrated PC's or workstations and advertised and sold the systems under its own name. Program modules included a Media Print Program, a Point of Purchase (POP) Merchandising Program and a Publisher Rebate Program.

Intel set aside funds which could be claimed by participating OEM's to support advertising costs. To be eligible for reimbursement, an advertisement had to appear in newspapers or magazines. TV, billboards and brochures were not reimbursable. Intel offered to reimburse up to 50% of the cost of an advertisement containing the Intel Inside logo.

The second module of the Partnership Marketing Program was the Point of Purchase Program. By placing Intel Inside logo stickers on their products and shipping boxes, PC and workstation manufacturers could receive reimbursement based on a percentage of the sales of those products exhibiting Intel stickers.

Intel negotiated a Publisher Rebate Program with major publishing houses. Publishers participating in the program offered a special advertising rate to OEM's who used the Intel Inside logo in their ads. Manufacturers of computers who participated in the campaign were able to take advantage of co-op advertising funds, which Intel provided for shared advertising space that met its "Intel Inside" campaign requirements (see exhibit 7).

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Intel executives estimated the worth of advertising and merchandising space using the "Intel Inside" logo to be $250 million, according to prevailing media prices. Part of it was paid by Intel, part by the OEMs, and the rest was made possible by the favorable advertising rates.

Response to the Intel Inside Campaign

Some industry observers felt that by launching the Intel Inside campaign, Intel risked alienating its direct customers, i.e. manufacturers and assemblers of PC's and workstations. Major OEM brands hesitated to adopt the use of the Intel Inside logo, because they were concerned about the effect this would have on their own product brand equities. They feared that use of the Intel logo in their own advertisements would detract attention from their own brand name.

At the same time, many of the OEM's participating in the campaign reported that the use of the Intel logo had "boosted their advertising effectiveness." One advertising manager stated that "the Intel Inside program has been good for us. It has helped add some credibility and enhancements to our messages." Another OEM participant in the co-op program said, "The Intel logo communicated to my customers that my product is a quality product."

In November 1992 Compaq and Hewlett-Packard, two of Intel's biggest customers, continued in their refusal to use the logo, maintaining that it made their efforts to differentiate its PCs from the clones less effective.

The Outlook

While projections of short term effectiveness of the campaign were positive, the long term prospects were not that clear. One industry analyst familiar with the Intel Inside campaign believed that while the campaign would be successful in creating customer loyalty in the short run, the long run effects would be minimal. He compared the attraction of the Intel 386 chip to that of the IBM PC ten years earlier. "In the early 1980's, corporate buyers wouldn't buy anything but an IBM ... Now, big companies are buying computers from suppliers that no one's ever heard of. What happened is that gradually the users got smart and realized there really wasn't any difference -- that you could save a lot of money by going with a no-name."

By November the Intel Inside logo appeared on nearly 3000 advertising pages during the first three months of the campaign, in cooperation with 100 of the original equipment manufacturers who signed on to the Intel Inside campaign. The logo was endorsed by 342 manufacturers of PC's, including, Zenith Data Systems, Everex Systems, NCR, Dell and AST Research. These OEMs used it on their advertisements and also on the PC's, packaging and part of purchase displays.

Jim Seymour

On November 11, PC Week, a leading industry publication printed a commentary by Jim Seymour, titled "Intel: Is it still inside "The Computer Inside?" Seymour was one of the very outspoken experts, who was widely read by those interested in the personal computer industry (see exhibit 8). He wrote:

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> "So Intel has a clear shot through the rest of the 1990's? Again: no way. Because a flood of smart aggressive CPU-cloners is going to be nipping at its heels ... It's important to understand that this isn't going to be just an Intel vs AMD contest.
>
> Chips and Technologies ... [and] ... NexGen[3] ... are going to be joined by a dozen or more Asian foundries, which by early 1993 at the latest will have entered the market with 386 and 486 compatible chips, mopping up market share ... Intel's only hope to continue to lead the x86 parade - rather than merely designing each new generation of chips, then falling back in the pack 'till the next new product introduction - is to aggressively make its products obsolete. I think Intel understands that pulling forward the 586 schedule is a good sign. Intel has the human and financial capital to stay on top - if it spends it well. But the x86 architecture has enough momentum to continue to dominate this business, no matter how well or how foolishly Intel spends that capital."

Jon Brown noticed that the European OEMs reacted similarly to their American counterparts. The stronger their brand equity the more resistance an OEM displayed. Surely the endorsement of Intel Inside by Compaq, Hewlett-Packard, and IBM would help him "crack" the market. However, these OEMs had not been successfully signed on yet. IBM had initially joined and then had second thoughts and the other two were not relenting. He was preparing his presentation to Olivetti when the copy Business Week, quoting Compaq's reaction, reached his desk.

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[3] both were microprocessor manufacturers.

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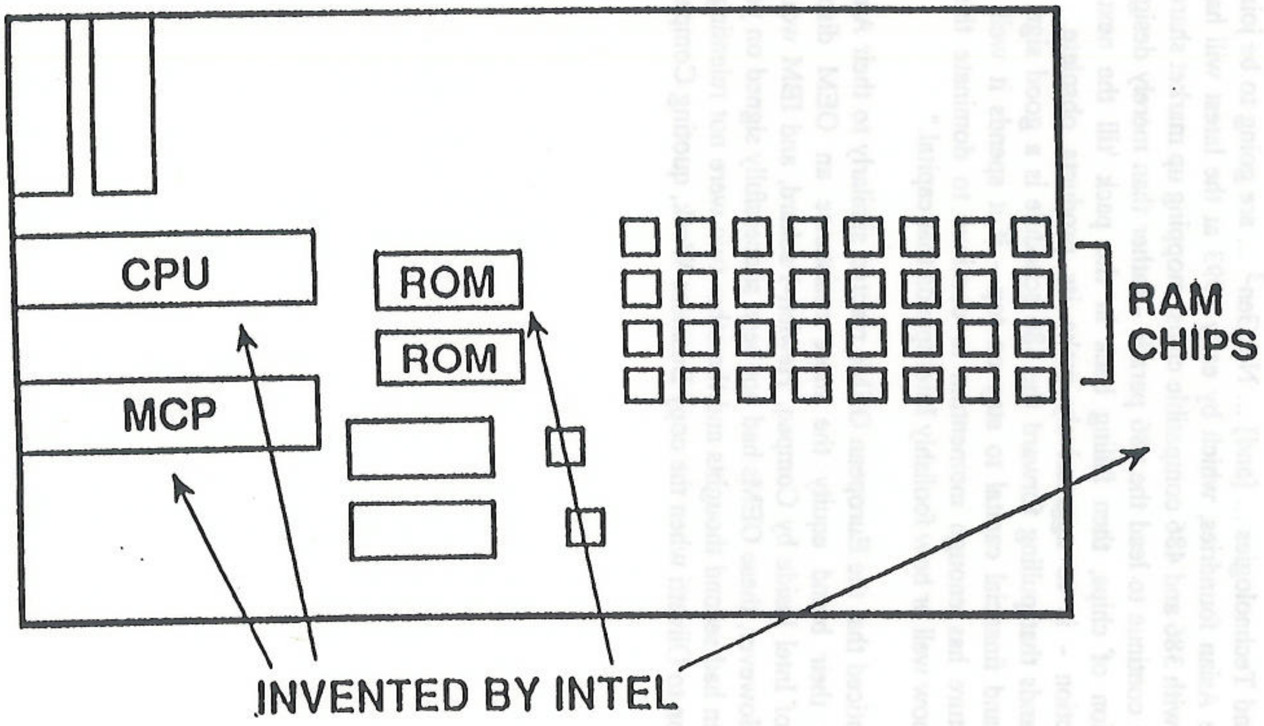
Exhibit 1

THE COMPUTER INSIDE™


CPU
ROM
ROM
MCP
RAM
CHIPS
INVENTED BY INTEL

European intel® End User Marketing

js\insead.ppt

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Exhibit 2

INTEL CORPORATION

Financial Summary for the Years Ended December 28, 1982-1991

Millions of Dollars

YEAR	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Net Revenues	899	1122	1629	1365	1265	1907	2875	3127	3921	4779
Cost of Sales	542	624	883	943	861	1014	1506	1721	1930	2316
Research & Development	131	142	180	195	228	260	318	365	517	618
Operating Income (Loss)	28	139	250	60	195	246	594	557	858	1080
Net Income (Loss)	30	116	198	2	203	248	453	391	650	819
Net Investment in Property Plant & Equipment	462	504	778	848	779	891	1122	1284	1658	2163
Total Assets	1050	1680	2029	2153	1977	2499	3550	3994	5376	6292
Long-Term Debt	197	128	146	271	287	298	479	412	315	363
Stock-Holders Equity	552	1122	1360	1421	1245	1276	2080	2549	3592	4418

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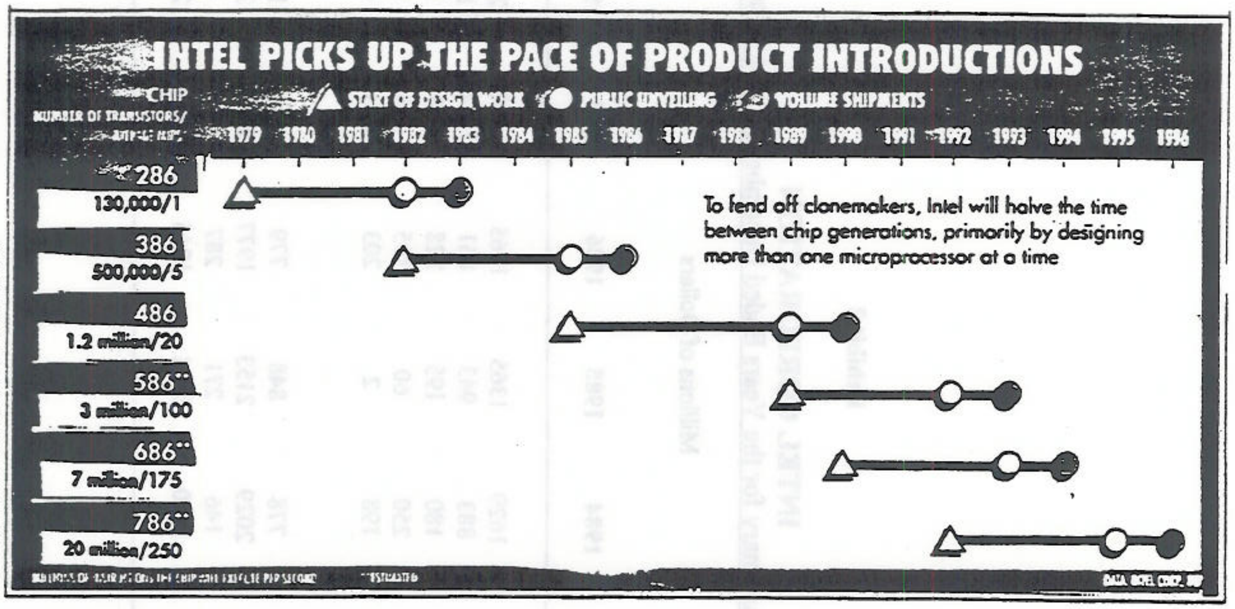
Exhibit 3


INTEL PICKS UP THE PACE OF PRODUCT INTRODUCTIONS

To fend off clonemakers, Intel will halve the time between chip generations, primarily by designing more than one microprocessor at a time

*MILLIONS OF INSTRUCTIONS THE CHIP CAN EXECUTE PER SECOND **ESTIMATED

DATA: INTEL CORP., BW

PHOTOGRAPH BY JAME TANAKA, CHART BY LAUREL DAUNIS/BW

88 BUSINESS WEEK/JUNE 1, 1992

COVER STORY

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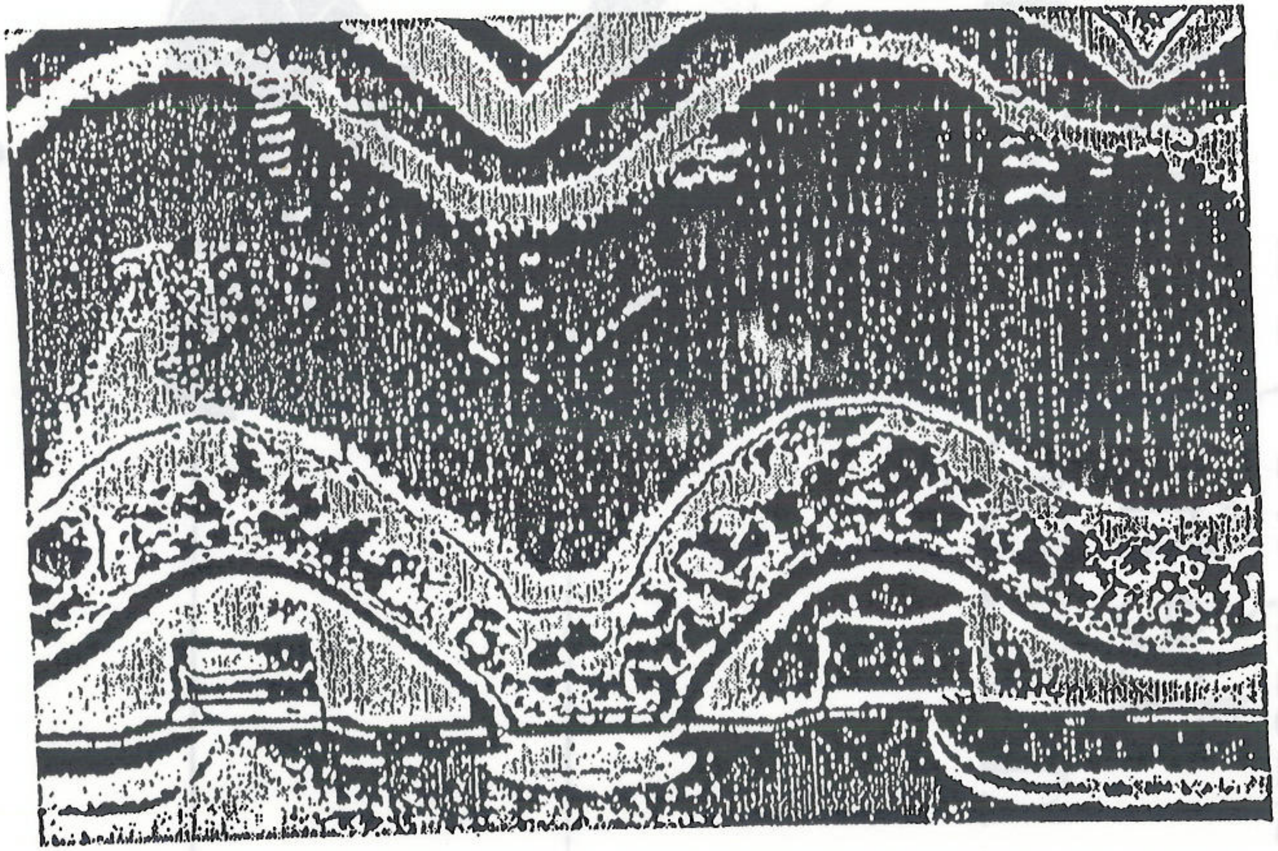
Exhibit 4

TRANSISTORS – 1990



European End User Marketing

js\insead.ppt

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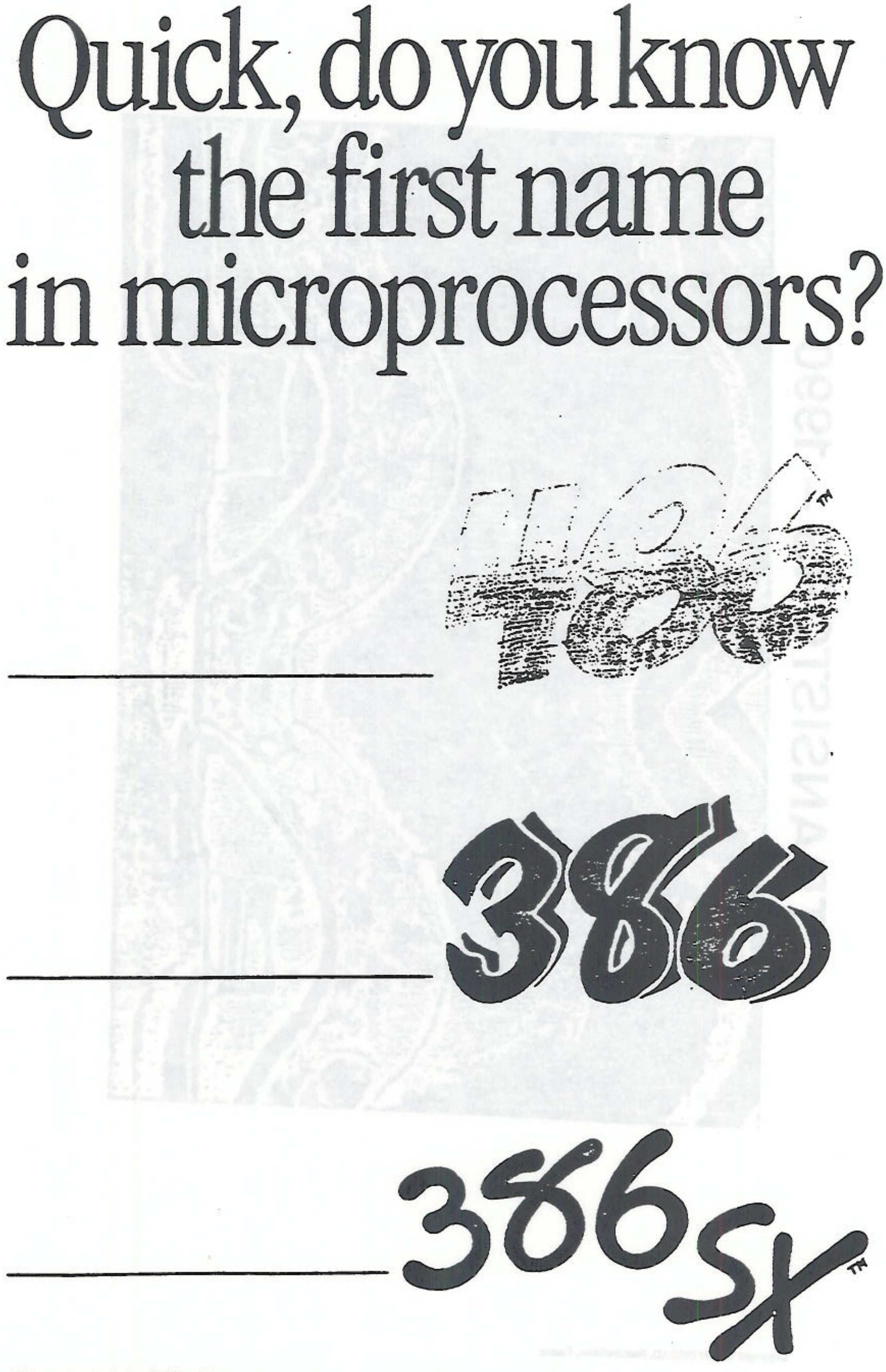
Exhibit 5



Quick, do you know the first name in microprocessors?

____________________ 486™

____________________ 386

____________________ 386SX™

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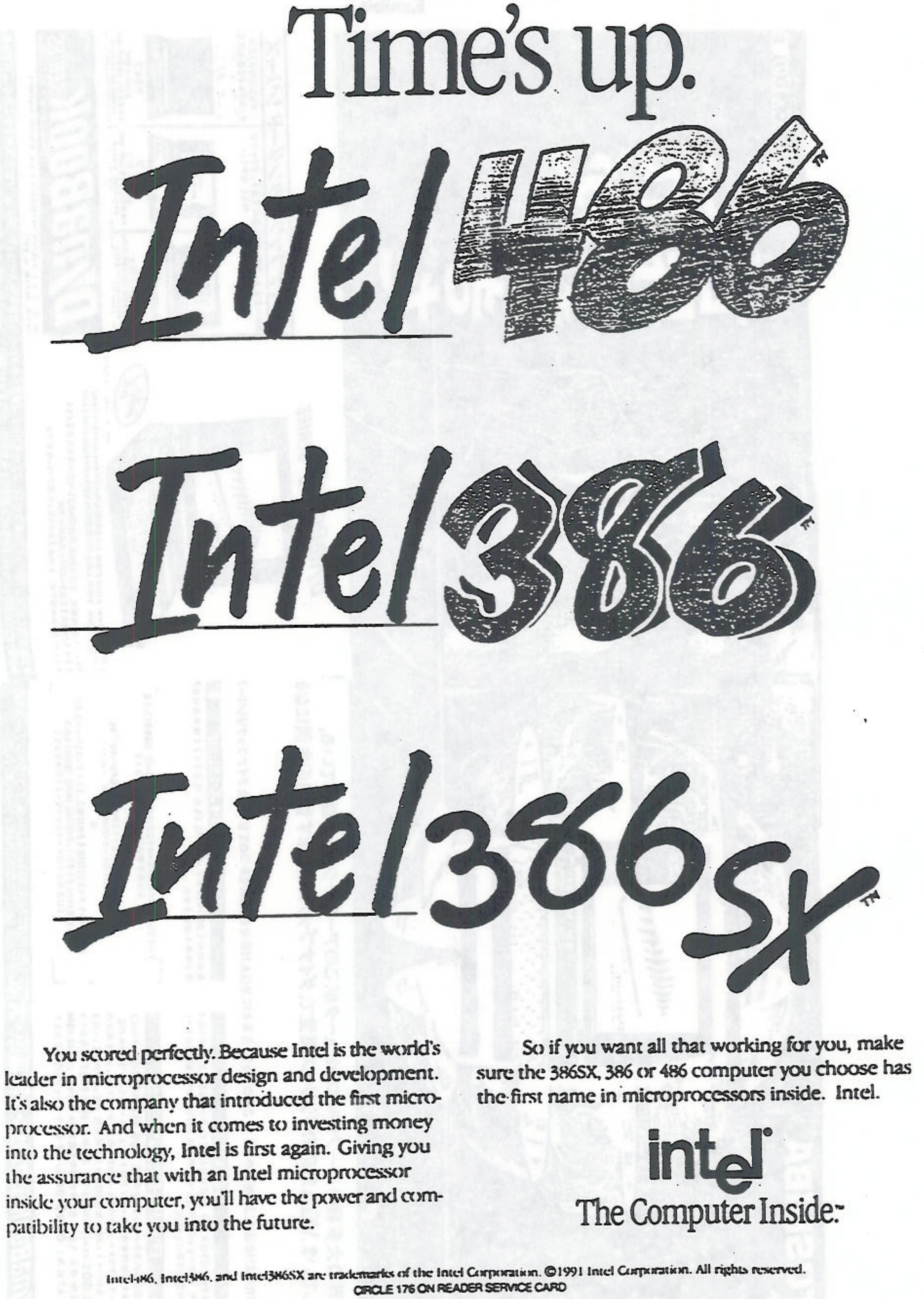
Exhibit 5 (Continued)



Time's up.

Intel486™

Intel386™

Intel386SX™

You scored perfectly. Because Intel is the world's leader in microprocessor design and development. It's also the company that introduced the first microprocessor. And when it comes to investing money into the technology, Intel is first again. Giving you the assurance that with an Intel microprocessor inside your computer, you'll have the power and compatibility to take you into the future.

So if you want all that working for you, make sure the 386SX, 386 or 486 computer you choose has the first name in microprocessors inside. Intel.

intel®
The Computer Inside.™

Intel486, Intel386, and Intel386SX are trademarks of the Intel Corporation. ©1991 Intel Corporation. All rights reserved.
CIRCLE 176 ON READER SERVICE CARD

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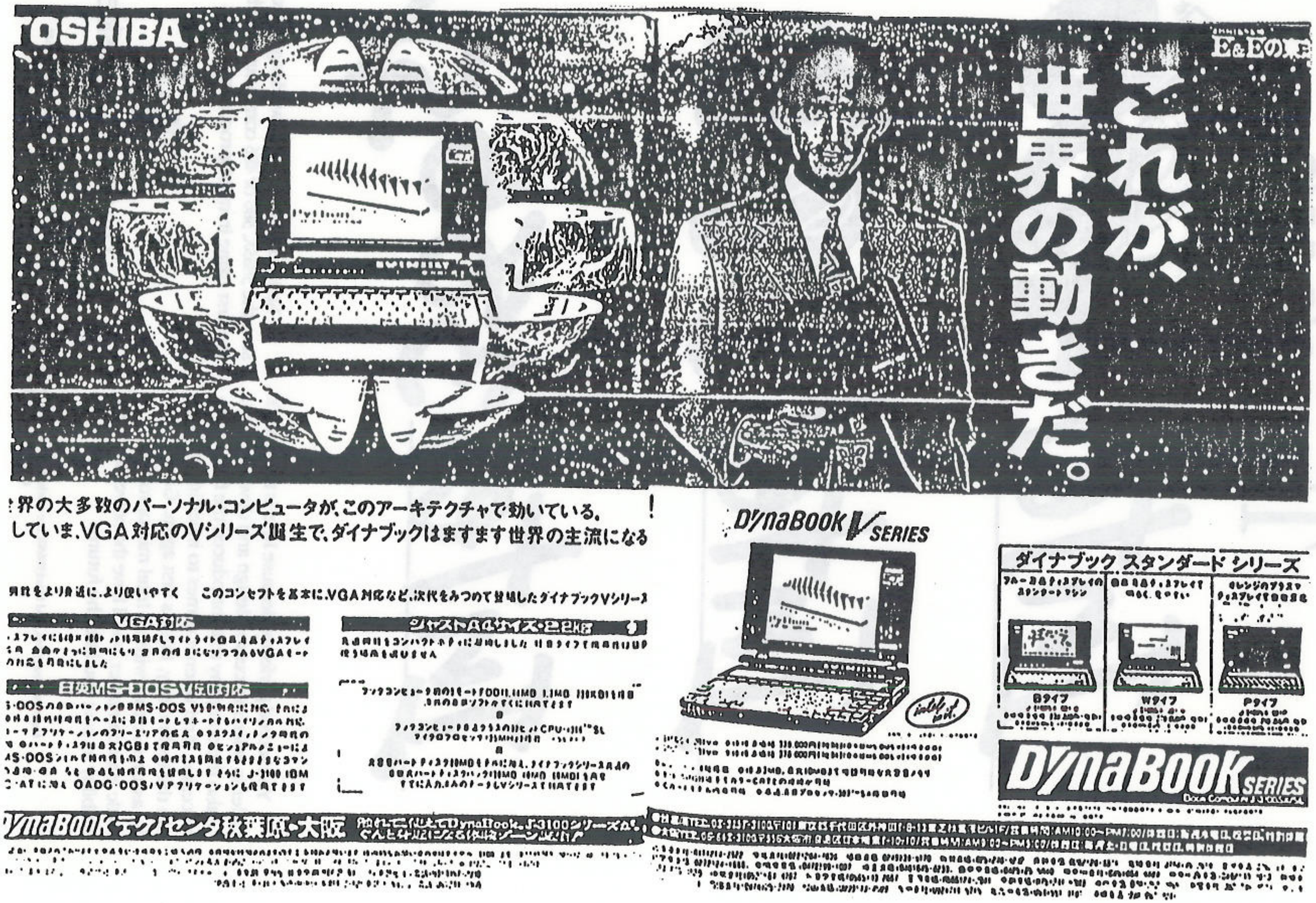
Exhibit 6


TOSHIBA
E&Eの
これが、世界の動きだ。
DynaBook V SERIES
ダイナブック スタンダード シリーズ
Bタイプ
Wタイプ
Pタイプ
DynaBook SERIES
VGA対応
DynaBookテクノセンタ秋葉原・大阪

界の大多数のパーソナル・コンピュータが、このアーキテクチャで動いている。
していま、VGA対応のVシリーズ誕生で、ダイナブックはますます世界の主流になる

このコンセプトを基本に、VGA対応など、次代をみつめて登場したダイナブックVシリーズ

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Exhibit 7

Market Development Program Questions and Answers

1. Q. When will the dollars for the Market Development Program allowance start to accrue to my account?

   A. Allowances will accrue on shipments of Intel CPUs beginning July 1, 1991 for those qualified OEMs who sign and return their agreements by September 30, 1991. After September 30, 1991, allowances will accrue from the first of the month in which the signed agreement is received.

2. Q. How can the accrual allowance be used and for what activity?

   A. The Intel Inside Program will reimburse up to 50% of all approved end-user print media advertising. Reimbursable print media advertising includes magazine and newspaper ads and inserts. Print media placement costs, less discounts and rebates, up to the amount available in the accrual fund, will be reimbursed. Production costs, agency fees, talent charges, and any applicable taxes such as value added taxes (VAT) are not reimbursable.

3. Q. May I use the Intel Inside logo in other merchandising materials?

   A. You may use the logo in other merchandising materials such as brochures, display posters, packaging, etc., but these will not qualify for reimbursement. The logo cannot be permanently affixed to your product.

4. Q. How can I be reimbursed for eligible and approved print media advertising?

   A. An Intel Inside Market Development Program Claim Form should be completed. You must indicate your Intel Inside Market Development Program I.D. number on the claim form. No claims will be processed without this I.D. number.

5. Q. What additional documentation do I need to submit with my claim form?

   A. The media placement documentation differs by type of medium and is specified at the bottom of your claim form. If you do not purchase Intel CPUs directly from Intel, you should also include a copy of your vendor invoice or shipping documentation as proof of purchase. The documentation you submit must identify the type of CPU (e.g., Intel386™ DX-33, Intel486™ DX-25, etc.) and the date of purchase.

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Exhibit 7 (Continued)

6. Q. When may I expect reimbursement and in what manner?

A. A check will be sent directly to you by MEDIANET within 10 working days of the receipt of a correctly completed claim form with appropriate documentation. The upper portion of the check will identify the advertising for which you are being reimbursed. International sites will receive a wire transfer in the appropriate currency. A Payment Document will be mailed detailing the advertising for which you are being reimbursed. Wire transfer fees will be paid by the Intel Inside Program.

7. Q. How will I be notified if additional documentation is needed for my claim?

A. The Intel Inside Account Team at MEDIANET or your local European Intel Inside Program Office will send you an Audit Report detailing the information needed. You should return the Audit Report with the requested information within 45 days of the document date. The original claim will be retained at MEDIANET. To avoid a time delay, the Audit Report will be faxed to International sites. A faxed reply will be acceptable unless original documentation is requested (e.g. tear sheet).

8. Q. What if I do not have enough accrual allowance in my account to reimburse the advertising charges claimed?

A. The Intel Inside Program will reimburse you up to the accrual allowance in your account. You may resubmit your claim one time only within 60 days if additional accrual allowances are available. Please send a copy of the original claim and the supporting documentation you received (e.g. reimbursement check, audit report) and print on the claim copy in bold letters "RESUBMISSION."

9. Q. How can I find out about my Intel Inside account balance?

A. You can call the Intel Inside 800 number at MEDIANET. They will be available to answer all questions about your Intel Inside account balance, claim status and program guidelines from 8:00 a.m. until 5:00 p.m. (CST) Monday through Friday.

Intel Inside Hot Line
1-800-688-8052

Since 800 numbers cannot be used for international calls, the international sites should call the Intel Inside Account Team at (512) 331-0355, Monday through Friday, from 8:00 a.m. until 5:00 p.m. (CST) or the local Intel Inside Program Office. Another alternative is to use the Intel Inside dedicated FAX Number, (512) 836-7032. MEDIANET will fax a response within 48 hours.

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Exhibit 7 (Continued)

10. Q. **Will I receive a monthly report detailing my Intel Inside usage and balance, similar to a bank statement?**

A. **Once you have signed the Intel Inside Market Development Program & Trademark License Agreement; you will receive a monthly Participant Activity Statement. This statement will be mailed after the first of each month. This statement will detail your prior balance, the accrual allowance earned for the prior month, all claims processed that month, any adjustments, and your ending balance.**

11. Q. When is it necessary to obtain prior approval for an ad?

A. Prior approval should be obtained in the following instances:

1) Existing multi-product ads that are being modified to incorporate the Intel Inside logo.
2) Dealer ads. Only "camera-ready" ads provided to your dealer will be considered for approval.
3) Any ad where there is doubt about its eligibility or the eligibility of the publication in which it is placed.

12. Q. How do I obtain prior approval?

A. An Intel Inside Prior Approval Form should be completed. The ad copy and layout should be attached. The completed approval form and appropriate documentation should be sent to:

Intel Inside™ Program
c/o MEDIANET, Inc.
P.O. Box 203218
Austin, Texas 78720-3218

International Prior Approval Forms should be sent to your local Intel Inside Program Office.

13. Q. How far in advance do I need to apply for prior approval?

A. Ideally, you should send in your Prior Approval Form four weeks before the date of submission of your ad to the publication.

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Exhibit 7 (Continued)

14. Q. How will I be notified of approval of my ad?

A. A copy of the prior approval form will be sent directly to you by MEDIANET or your local Intel Inside Program Office within 2 working days of its receipt, provided that it is completed correctly and accompanied by the appropriate documentation. The lower portion of the form will indicate approval and the qualifying reimbursement percent. Or, you may contact MEDIANET directly on the Intel Inside Hot Line.

15. Q. Where do I obtain prior approval forms?

A. Forms can be obtained from Medianet or your local Intel Inside Program office listed on the back page of the Program's Terms and Conditions.

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Exhibit 8

Intel: Is It Still Inside 'The Computer Inside'?

By Jim Seymour

In this issue you'll find extensive coverage on the future of Intel X86 chips and X86 clone chips in the PC business in our "World of the Chip" Special Report. I want to pass along a few personal views, as well.

THE CORPORATE MICRO

Put plainly, Intel has screwed up a lot lately. The 386SL power-saving chip, for example, is hard to use, and so far, at least, no PC designer has been able to deliver anything like Intel's claims for longer battery life in 386SL machines.

And Intel has made a fool of itself with its 486SX strategy. The success of "SX'ing" the 386 is self-evident. But the company's 486SX strategy, from the basic 486SX chip with its math coprocessor intentionally disabled to upgrade chips that knock out the original microprocessor, seems to have come not from the people who made Intel a powerhouse, but from the Keystone Kops School of Microprocessor Marketing.

And it doesn't seem to get any better. Yes, Intel is about to stop making 486SXs with the math coprocessors euthanized—but for the wrong reason. It turns out that by removing the coprocessor circuitry entirely rather than embalming it, Intel can make the part just enough smaller to turn it into a surface-mount device, giving its customers additional economies in mounting the chip on motherboards.

As nice as the new clock-doubler chips coming soon from Intel will be—allowing you to double the internal speed of your Intel CPU chip—the company's directives to OEMs over how that chip will be delivered recall that same Keystone Kops style of management.

Intel's worried, of course, that the success of these clock-doubler chips could create a huge pool of slightly used 486 chips hanging over the market, which would wreck the company's finely crafted efforts to control the market price of new 486s.

The bill of particulars could go on and on. But the issue for corporate buyers isn't whether Intel has been a dumb marketer of late. It's whether such challenges as MIPS' role in the Advanced Computing Environment (ACE) cabal (and that organization's sharp tilt toward the MIPS R4000 chip over Intel designs), or the IBM/Apple/Motorola PowerPC alliance, or even the impetus behind CISC designs, will overturn the X86 architecture as the desktop-scale business-computing standard.

In two words: No way.

ACE can't get out of its own way. With its leader, Compaq, distracted by its own problems, ACE is going to be a footnote to history.

I don't doubt that ACE machines will be built, will run Windows NT and will be sold. But as the next-generation standard, pushing X86 architecture aside, no thanks, no way, no how.

The IBM/Apple/Motorola deal is a larger threat. I have high hopes for the PowerPC and Taligent's Pink-and-Blue operating system. If everything works, they're going to produce hot systems. But they're not going to eclipse the X86 architecture.

So Intel has a clear shot through the rest of the 1990s? Again: No way. Because a flood of smart, aggressive CPU-cloners is going to be nipping at its heels.

It's important to understand that this isn't going to be just an Intel vs. AMD contest. Chips and Technologies took a big risk, did a great job and is going to benefit from its leap into Intel-compatible CPUs. NextGen is coming. And they're going to be joined by a dozen or more Asian foundries, which by early 1993 at the latest will have entered the market with 386 and 486 compatible chips, mopping up market share.

Intel's only hope to continue to lead the X86 parade—rather than merely designing each new generation of chips, then falling back in the pack 'til the next new product introduction—is to aggressively make its products obsolete. I think Intel understands that; pulling forward the 586 schedule is a good sign.

Intel has the human and financial capital to stay on top—if it spends it well. But the X86 architecture has enough momentum to continue to dominate this business, no matter how well or how foolishly Intel spends that capital. ■

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UNIVERSITY OF PENNSYLVANIA

THE WHARTON SCHOOL

MKTG101 (OPT)

Professor Kahn **Spring 1997**

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Voluntary Bulk Pack
Marketing 101
Professor Kahn

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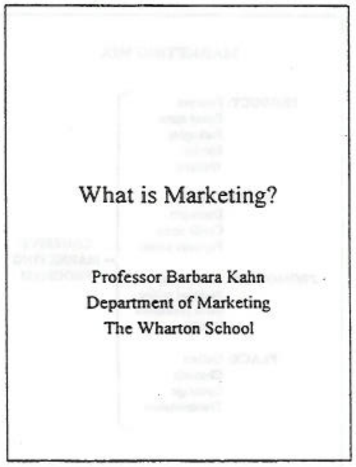
Lecture 1

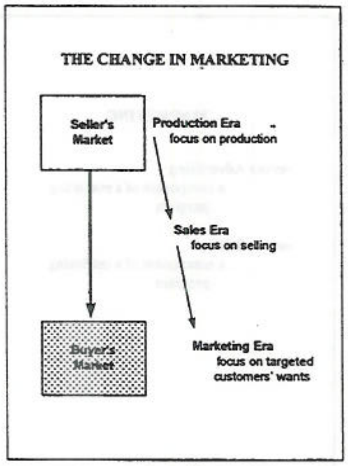
1

WHARTON REPROGRAPHICS



What is Marketing?

Professor Barbara Kahn
Department of Marketing
The Wharton School



THE CHANGE IN MARKETING

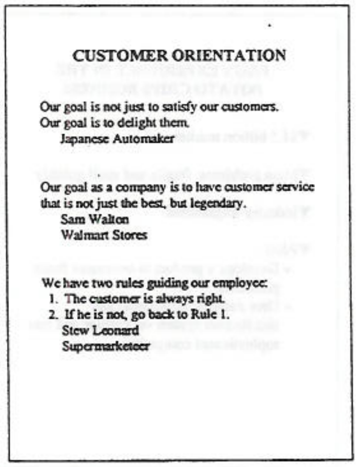
Seller's Market

Buyer's Market

Production Era
focus on production

Sales Era
focus on selling

Marketing Era
focus on targeted customers' wants

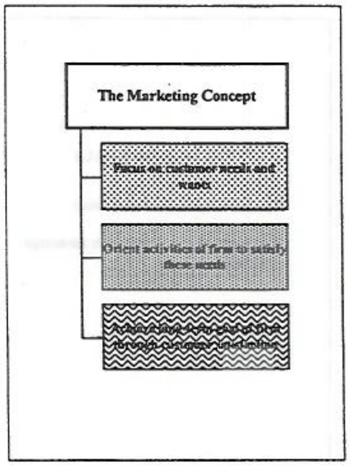


CUSTOMER ORIENTATION

Our goal is not just to satisfy our customers.
Our goal is to delight them.
Japanese Automaker

Our goal as a company is to have customer service that is not just the best, but legendary.
Sam Walton
Walmart Stores

We have two rules guiding our employee:
1. The customer is always right.
2. If he is not, go back to Rule 1.
Stew Leonard
Supermarketeer

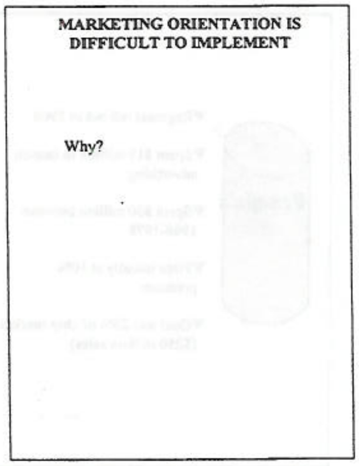


The Marketing Concept

Focus on customer needs and wants

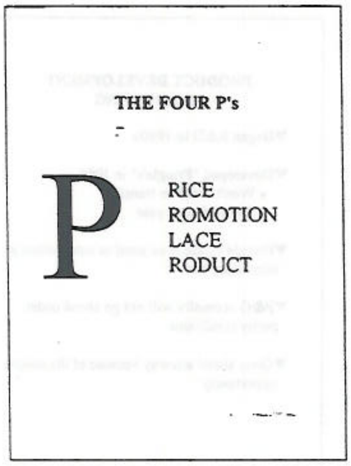
Orient activities of firm to satisfy these needs

Achieve long-term goals of firm through customer satisfaction



MARKETING ORIENTATION IS DIFFICULT TO IMPLEMENT

Why?



THE FOUR P's

P
RICE
ROMOTION
LACE
RODUCT

MARKETING

versus Advertising
. . . a component of a marketing program

versus Sales
. . . a component of a marketing program

MARKETING MIX

PRODUCT: Features
Brand name
Packaging
Service
Warranty

PRICE: List Price
Discounts
Credit terms
Payment period

PROMOTION: Advertising
Personal selling
Sales promotion
Publicity

PLACE: Outlets
Channels
Coverage
Transportation

COHESIVE MARKETING PROGRAM

TWO MAJOR GOALS

- ▼Satisfaction of consumer needs
- ▼Attainment of a competitive advantage over rivals

P&G's EXPERIENCE IN THE POTATO CHIPS BUSINESS

- ▼$1.5 billion market
- ▼Main problems: fragile and spoil quickly
- ▼Industry fragmented
- ▼P&G:
  - ▾Develops a product to overcome these problems
  - ▾Uses national advertising and distribution system vs. smaller and less sophisticated competitors

---

PRODUCT DEVELOPMENT AND TESTING

- ▼Began R&D in 1950's
- ▼Developed "Pringle's" in 1968
  - ▾Won't break in transit
  - ▾Shelf life one year
- ▼Pringle's judged as good as competition in blind taste test
- ▼P&G normally will not go ahead under parity conditions
- ▼Goes ahead anyway because of the unique opportunity

- ▼Regional roll out in 1968
- ▼Spent $15 million in launch advertising
- ▼Spent $50 million between 1968-1978
- ▼Price initially at 10% premium
- ▼Goal was 25% of chip market ($250 million sales)

RESULTS

- Achieved 25% share due to high trial
- Repeat purchase very low
- Had 10% share by the time it went national
- Dropped to 7% by 1978
- P&G withdraws advertising and brand support for Pringle's

POST-LAUNCH DIAGNOSIS

- Pringle's tasted artificial
- Consumers inferred artificial taste from physical characteristics:
  - Uniform shape and texture
  - Not burnt and greasy
  - Sold in can and not broken
  - Contains preservatives

CONCLUSIONS

- In developing a product which embodied attributes important to sellers, i.e.,
  - ship long distance with little breakage
  - shelf life over 1 year to limit spoilage,
- P&G neglected to develop a produce that embodied attributes important to the customer.

LESSONS FROM PRINGLE'S

- Importance of customer analysis
- Design products and services that embody attributes important to the consumer:
  - What attributes do consumers consider important in making buying decisions?
  - What is relative importance of these attributes to consumers?
  - To what extent does our product or service deliver on those attributes?

STEP 2

1. Sound customer analysis, while important, is not sufficient.
2. Competitors will also be striving to develop products and services that are important to customers.
3. Whatever attributes that our products or services embody must not only be important to customers but also must yield some differential advantage over competitors.
4. Successful marketing strategy requires sound COMPETITIVE ANALYSIS in addition to CONSUMER ANALYSIS.

HOW PRINGLE'S WAS RESCUED

1980: Experimental team assigned task of turning around unpopular Pringle's--or killing the chip.

Key: to go back and see what consumer wanted.

1. Flavor
2. Variety of flavors
3. More competitive pricing

HOW PRINGLE'S WAS RESCUED (continued)

1981:

- New advertising campaign, "We've got the fever for the flavor of a Pringle's"
- Sold cans individually (dropped the shrink wrap)
- Sizeable following among teens
  Kids: "They like the novelty of the chip and they don't know or care about Pringle's past."

WHY IS MARKETING IMPORTANT?

Marketing is "the study of exchange"

- Exchange is the foundation of organization activities
- Unless organizations can encourage exchange,
  - their resource bases disappear.

→Marketing is growing in importance.
→Move to marketing in many sectors.

MARKETING CONCEPTS CAN BE USED FOR:

- Business
- Politics
- Not-for-profit
- Services
- Schools
- Public Opinion
- Financial Services

ETHICS AND
SOCIAL RESPONSIBILITY

ETHICS: Moral principles and values that govern the actions and decisions of an individual or group. They serve as guidelines on how to act rightly and justly when faced with moral dilemmas.

LAWS: Society's values and standards that are enforceable in the courts.

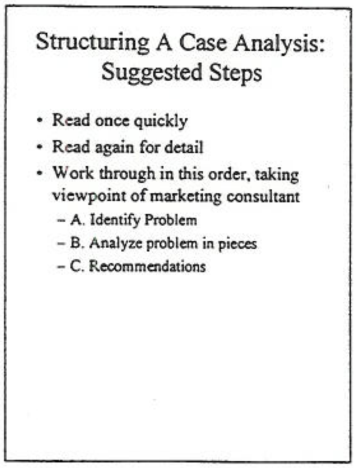
SOCIAL RESPONSIBILITY

1. Societal responsibility
2. Stakeholder responsibility
3. Profit responsibility

Case Analysis

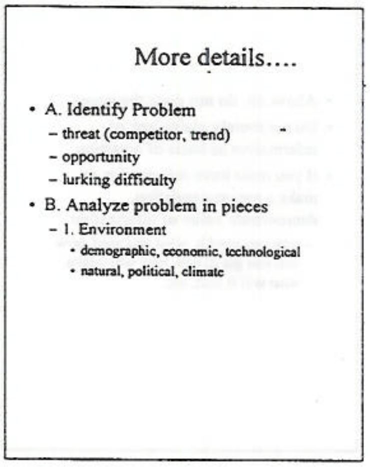
2 9

WHARTON REPROGRAPHICS



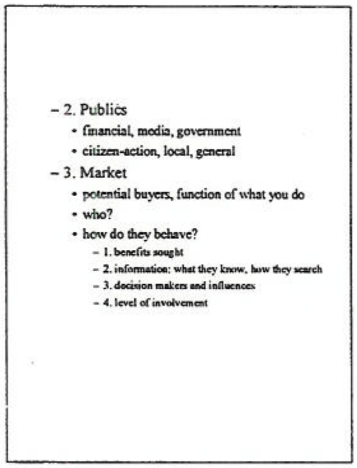
Structuring A Case Analysis: Suggested Steps

- Read once quickly
- Read again for detail
- Work through in this order, taking viewpoint of marketing consultant
  - A. Identify Problem
  - B. Analyze problem in pieces
  - C. Recommendations

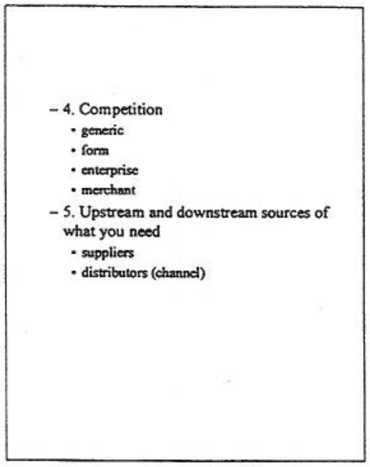


More details….

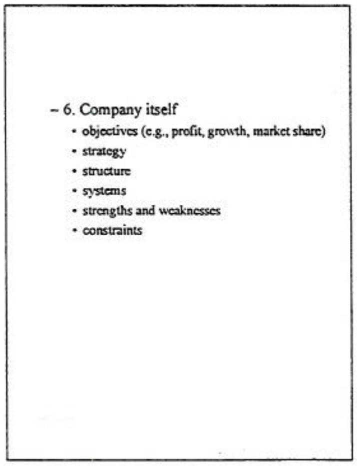
- A. Identify Problem
  - threat (competitor, trend)
  - opportunity
  - lurking difficulty
- B. Analyze problem in pieces
  - 1. Environment
    - demographic, economic, technological
    - natural, political, climate



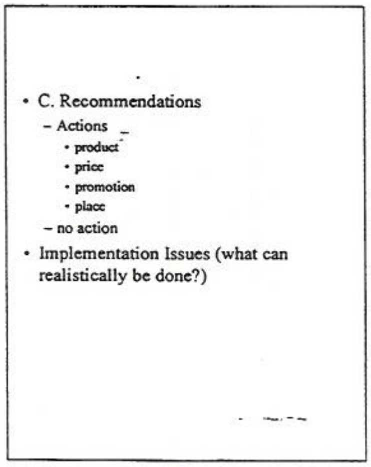
- 2. Publics
  - financial, media, government
  - citizen-action, local, general
- 3. Market
  - potential buyers, function of what you do
  - who?
  - how do they behave?
    - 1. benefits sought
    - 2. information: what they know, how they search
    - 3. decision makers and influences
    - 4. level of involvement



- 4. Competition
  - generic
  - form
  - enterprise
  - merchant
- 5. Upstream and downstream sources of what you need
  - suppliers
  - distributors (channel)



- 6. Company itself
  - objectives (e.g., profit, growth, market share)
  - strategy
  - structure
  - systems
  - strengths and weaknesses
  - constraints



- C. Recommendations
  - Actions
    - product
    - price
    - promotion
    - place
  - no action
- Implementation Issues (what can realistically be done?)

- Above all, do not duck the issues
- Do not merely claim lack of information as basis of no action
- if you must have information to make a recommendation, demonstrate value of information
  - why you need it, what you need, how will you get it, how long will it take, what will it cost, etc.

Ethics

WHARTON REPROGRAPHICS

ETHICS AND SOCIAL RESPONSIBILITY

Professor Barbara Kahn

Ethics: Moral principles and values that govern the actions and decisions of an individual or group. They serve as guidelines on how to act rightly and justly when faced with moral dilemmas.

Laws: Society's values and standards that are enforceable in the courts.

- Can make marketing decisions that are legal but unethical
- Can make marketing decisions that are illegal but ethical

Ethical Exchange Relationships
- Both buyer and seller should be better off after a transaction
- Used to be *Caveat Emptor*

Consumer Bill of Rights (1962)
- Right to safety
- Right to be informed
- Right to choose
- Right to be heard

Ethical choices are based on personal moral philosophy.
- **Moral idealism**
- **Utilitarianism**
- **"Justice" perspective**
- **Social responsibility**

1. Profit responsibility

2. Stakeholder responsibility
- Companies have a responsibility to their stakeholders--those who can affect achievement of its objectives

3. Societal responsibility
- Companies have an obligation to society

SEVEN STEP MORAL REASONING MODEL

1. What are the relevant facts?
2. What are the ethical issues?
3. Who are the primary stakeholders?
4. What are the possible alternatives?
5. What is the ethics of the alternatives?
6. What are the practical constraints?
7. What actions should be taken?

Lecture 2: Jan 20
Marketing Strategy

4

WHARTON REPROGRAPHICS

Marketing Strategy and the Changing Environment

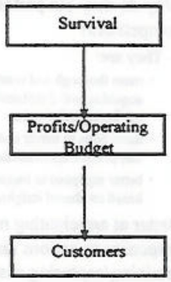
Professor Barbara Kahn
The Wharton School
University of Pennsylvania

OUTLINE

I. Changing Environment

II. Marketing Strategy Development

HIERARCHY OF BUSINESS OBJECTIVES



Survival

Profits/Operating Budget

Customers

BASIC GOAL IS TO SURVIVE

1. The environment is constantly changing.

2. Changes usually impose threats.

AN ENVIRONMENTAL SCAN FOR THE 1990'S

	Trend Identified by an Environmental Scan
Social	▾Aging world population ▾Changing family composition ▾More working women (changing role of women worldwide)
Economic	▾Global markets ▾Less acceptance of debt

AN ENVIRONMENTAL SCAN FOR THE 1990'S (cont.)

	Trend Identified by an Environmental Scan
Technological	▾Increased use of technology ▾World-wide use of Internet ▾Major breakthroughs in biotechnology ▾Increased use of massive computer databases
Competitive	▾More employment in small, innovative firms ▾Downsizing and restructuring of many corporations ▾Changing retail environment – disintermediaries

ENVIRONMENTAL THREATS CAN ALSO COME FROM COMPETITION

- From other products
  - Smith Corona vs. Royal
- From abroad
  - US. Automobile industry
- From different products offering same service
  - Cadillac

Open-Minded Scanning

- scan with peripheral vision
- benchmark beyond the obvious
- continuously experiment
- spread information throughout firm

Closed-Minded Scanning

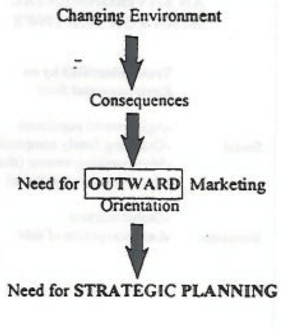
- over-reliance on internal data
- loss of sensitivity to long-run trends (missing the forest for the trees)
- "security blanket" research
- inability to learn from failures

Market-Driven Firms

- Why do they out perform their competitors?
  - They are:
    - more thorough and creative at acquiring and distributing marketing information
    - more open to trends and events that present opportunities
    - better equipped to make decisions based on shared insights
- Better at anticipating market responses to actions aimed at retaining/capturing customers and thwarting competitors

TURN THREAT INTO OPPORTUNITY

1. Match internal strengths and weaknesses with external forces/constraints
2. Eliminate the competition



Changing Environment

Consequences

Need for **OUTWARD** Marketing Orientation

Need for STRATEGIC PLANNING

MARKETING STRATEGY INCLUDES . . .

Defining the Company Mission

Company mission is shaped by 5 elements:

1. History
2. Current preferences of management
3. Market environment
4. Resources
5. Distinctive competence

Importance of Top Management Commitment

- signal with behavior and commitment
- propose challenging targets
- use strategy development process to build acceptance and understanding
- need effective leadership
- provide incentives
- effective communication

THE MISSION STATEMENT

The Mary Kay Vision

--To be preeminent in the manufacturing, distribution, and marketing of personal care products through our independent sales force.
--To provide our sales force an unparalleled opportunity for financial independence, career achievement, and personal fulfilment.
--To achieve total customer satisfaction, worldwide by focusing on quality, value, convenience, innovation, and personal service.

Richard C. Bartlett, President

Mission Statements Lead to a Hierarchy of Objectives

Use Objectives to Guide Decision-Making

- Which product-market to compete in
- Functional policies needed to compete in selected markets
- The level of investment
- The sustainable competitive advantage that will provide the business-core

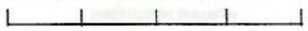
---

1. Defining Business

- What business do customers think we're in?

Too broad	no direction
Too narrow	missed opportunities and threats

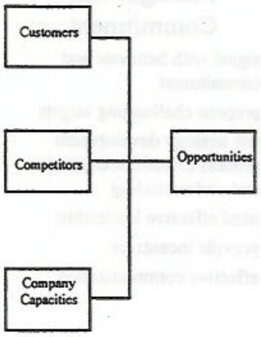
PRODUCT-MARKET SPACE FOR ENTERTAINMENT BUSINESS



- Showing motion pictures
- Develop network tv
- Broadcast cable tv
- Produce monograph records
- Produce video games

- Operate theme parks
- Provide cable tv
- Operate ski resort
- Stage rock concerts

OPPORTUNITY ANALYSIS



Customers

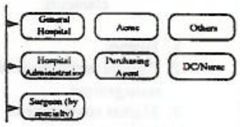
Competitors

Opportunities

Company Capacities

SUTURE BUSINESS

Who should be your customer?
Manufacturer: Surgitek Inc.



General Hospital

Acme

Others

Hospital Administration

Purchasing Agent

DC/Nurse

Surgeons (by specialty)

OPPORTUNITY ANALYSIS -- IDENTIFY STRATEGIC ALTERNATIVE

- Compare your resources with those of others aiming at the same target
- Determine which needs are poorly satisfied
- When have we been successful and why?
- What is our differential advantage relative to competition?

COMPETITOR ANALYSIS

- Objectives
- Potential competitors?
- Current strategy
- Assess their future goals
- Strengths/weaknesses
- Future goals

I. Side-by-side comparison against best of target competitors

Emphasis: Relative standings

II. Benchmarking

CONCLUSIONS FROM COMPETITOR ANALYSIS

1. Possible offensive moves of competitors
2. Defensive capabilities of competitors
3. Then pick the battleground

Company Capabilities

- Financial strength
- Technological strength
- Behavior patterns
- Plant capacity
- Personnel
- Customer Reputation

Develop Marketing Strategy

- What is your sustainable competitive advantage
- What is your core strategy for meeting your objectives?
- Identify Marketing Mix strategies:
  - product/benefits
  - place
  - promotion
  - price

IMPLEMENTATION AND CONTROL

Need specific marketing tactics

The 4 P's

Lecture 3: Jan. 27
Product Life Cycle

5

WHARTON REPROGRAPHICS

Product Life Cycle

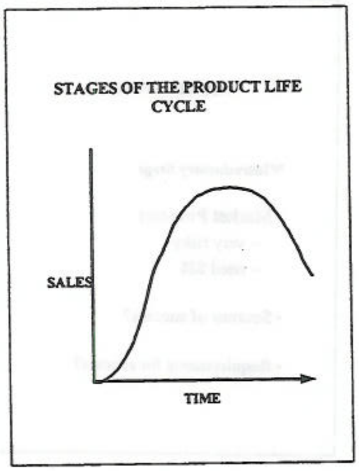
Professor Barbara Kahn
Department of Marketing
The Wharton School

THE PRODUCT LIFE CYCLE

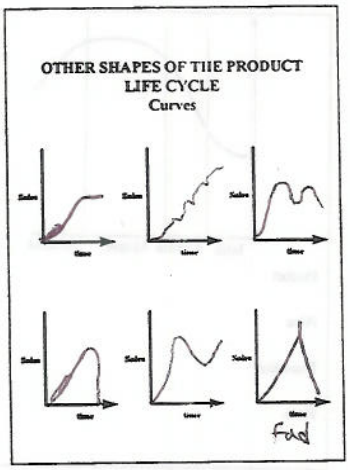
--What is it?

--What is behind it?

--What are the strategic implications?



STAGES OF THE PRODUCT LIFE CYCLE



OTHER SHAPES OF THE PRODUCT LIFE CYCLE

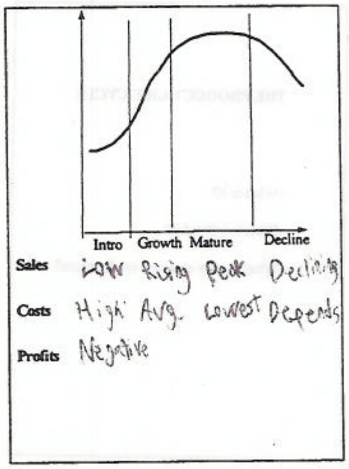
Curves

CRITICISM OF THE "TOOL"

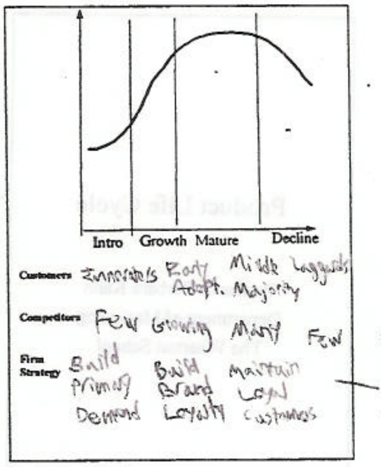
- ▼Patterns are too variable
- ▼Unexpected changes
- ▼Self-fulfilled prophecy
- ▼Never be dogmatic

BENEFITS OF PREDICTABILITY

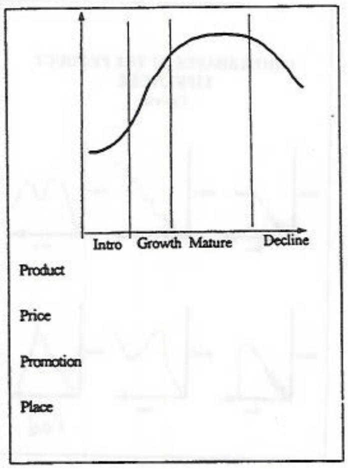
- ▼In resource allocation
- ▼In the choice of strategy
- ▼In timing



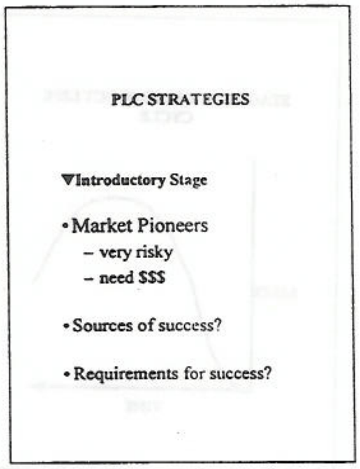
	Intro	Growth	Mature	Decline
Sales	Low	Rising	Peak	Declining
Costs	High	Avg.	Lowest	Depends
Profits	Negative			



	Intro	Growth	Mature	Decline
Customers	Innovators	Early Adopt.	Middle Majority	Laggards
Competitors	Few	Growing	Many	Few
Firm Strategy	Build primary Demand	Build Brand Loyalty	Maintain Loyal Customers	Reduce Expenses Milk brand



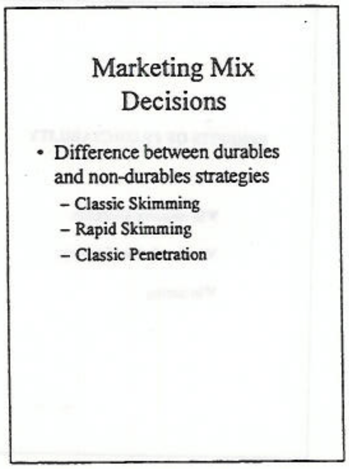
	Intro	Growth	Mature	Decline
Product				
Price				
Promotion				
Place				



PLC STRATEGIES

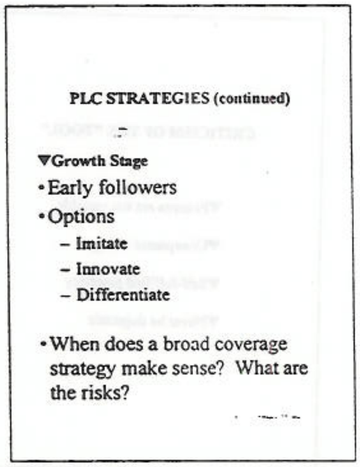
▼**Introductory Stage**

- Market Pioneers
  - very risky
  - need $$$
- Sources of success?
- Requirements for success?



Marketing Mix Decisions

- Difference between durables and non-durables strategies
  - Classic Skimming
  - Rapid Skimming
  - Classic Penetration



PLC STRATEGIES (continued)

▼**Growth Stage**

- Early followers
- Options
  - Imitate
  - Innovate
  - Differentiate
- When does a broad coverage strategy make sense? What are the risks?

OFFENSIVE STRATEGIES

- Frontal attack
- Flanking attack
- Encirclement
- By-pass attack
- Guerilla warfare

PLC STRATEGIES (continued)

- **Mature Stage**
  - Pioneer new segment
  - Head-to-head competition with leader
  - Low cost strategy
  - Catch leader asleep

What is a Commodity?

- Adequate supply
- Mostly repeat customers
- Sophisticated buyers
- Price competition
- Competitors everywhere
- Hard to differentiate the product

Enduring Sources of Advantage

- Building strong relations with employees
- Strong Corporate Culture
- Brand Name / Reputation
- Channel Relationships
- Salesforce

Strategies for the Leader

- Insure customer satisfaction -- "stay awake"
- Improve product
- Build brand name -- top of mind awareness
- Emphasis on R&D -- keep up with technology
- Keep costs down
- Maintain infrastructure

Defensive Strategies

- Best defense = strong offense
- Don't underestimate anyone
- Block Flank Attacks:
  - broaden product line
  - lock-up channels
  - continuously innovate
  - patents/licensing arrangements
  - pre-empt source of supply

DEFENSIVE STRATEGIES

- Position defense
- Mobile defense
- Pre-emptive defense
- Flank-positioning defense
- Hedgehog defense

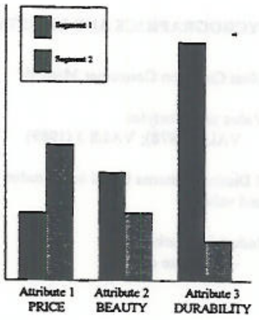
Lecture 4
Segmentation and Positioning

WHARTON REPROGRAPHICS 6

SEGMENTATION AND POSITIONING

Professor Barbara Kahn
Department of Marketing
The Wharton School

VALUES OF THE TWO SEGMENTS



Mass Marketing –
(Economies of Scale)

However, everyone is different
Customization

WHAT IS A MARKET SEGMENT?

Market segmentation is the subdividing of a market into distinct subsets, where any subset may conceivably be selected as a marketing target to be reached with a distinct marketing mix.

SEGMENTATION METHODS

I. Characteristics of the Customer

II. Benefits Sought

III. Systematic, Product-Related Behaviors
--purchasing behavior
--by channel

DEMOGRAPHICS

Easily measurable vital statistics

Industrial Markets:
--SIC code
--Size of company

Consumer Markets:
--gender
--age
--income

PSYCHOGRAPHICS AND LIFESTYLE

Most Common Consumer Method:

Value and lifestyles
VALS (1978); VALS 2 (1989)

8 Distinct patterns based on attitudes and values

Industrial Markets:
--corporate culture

VALS:

--I am often interested in theories.-

--I often crave excitement.

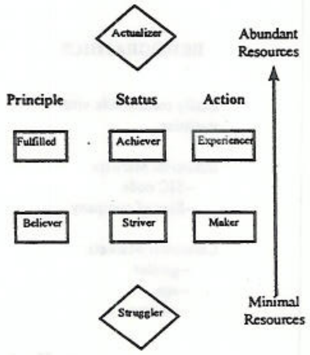
--I liked most of the subjects I studied in school.

--I like working with carpentry and mechanical tools.

--I must admit that I like to show off.

- Classify respondents along dimension of self- orientation:
  - principle-oriented
  - status-oriented
  - action-oriented

- 2nd Dimension:
  - Resources:
    Ability of individuals to pursue their dominant self-orientation


Actualizer
Abundant Resources
Principle
Status
Action
Fulfilled
Achiever
Experiencer
Believer
Striver
Maker
Struggler
Minimal Resources

BENEFIT SEGMENTATION

Assumption: The benefits people are seeking in consuming a given product are the basic reasons for the existence of true segments.

Applications of Benefits Segmentation

1. Air Freight Market

2. Toothpaste Market

FACTOR ANALYSIS OF BENEFITS

The Air Freight Market

Factor 1: "Time Sensitive"
- ▼Able to handle emergencies
- ▼Minimum door-to-door time
- ▼Prime night-time departures

Factor 2: Price Sensitive
- ▼Best price
- ▼Lower total cost
- ▼Daylight rates

FACTOR ANALYSIS OF BENEFITS

The Air Freight Market

Factor 3: "No Worry"
Keep the shipper informed
Honest and straightforward
Able to trace

Factor 4: Pick-up Sensitive
Good pick-up service
Minimum time between calls and pick-up
Good truck driver attitude

SEGMENTATION BY MEASURES OF BRAND LOYALTY

- ▼Behavioral measure based on purchase histories
- ▼Loyalty Rates
- ▼Purchase frequency
- ▼Brand switching rate

SEGMENT SELECTION

Criteria

- ▼Segment size
- ▼Growth of segment
- ▼Value of segment ($)
- ▼Current company position within segment
- ▼Easy of entry into segment
- ▼Ease of competitive entry into segment
- ▼Number and strength of competitors

WHEN DO YOU HAVE "GOOD" SEGMENTS?

- ▾You can reach them
- ▾Group is large enough to be profitable
- ▾You have the capability to build a marketing program target for them

Positioning

- Object: To gain competitive advantage by developing products which satisfy needs better than competitors
- Need: to understand customers
- Tool: Perceptual Map

Positioning

- designing and executing a marketing program to create a particular image of a product relative to competition
- this is distinct from **IMAGE**
- different aspects of a positioning decision:
    - on attribute
    - on price/quality
    - on usage situation
    - on product user
    - on competitor

Perceptual Mapping
a spatial representation of how individuals perceive various brands

▼Brands that are perceived to be most similar are located close to each Brand that are perceived to most dis-similar are further apart

Joint spaces
constructed from perceptual spaces by including some measure of preference

Ideal Point
Represents a consumer's ideal or most preferred combination of the attributes defining the space

Preference Vector
a vector passing through the origin indicating a direction of increasing preference

MANAGERIAL IMPLICATION OF PERCEPTUAL MAPS

1. Positioning decisions
2. Tracking consumer beliefs and feelings over time
3. To study competition
4. Segmentation

A MARKET SEGMENTATION STRATEGY

▼Can better identify marketing opportunities

▼Promotes new-product entries

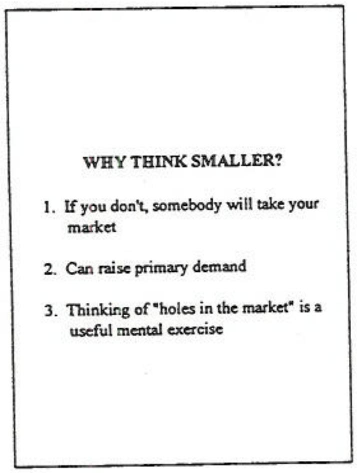
▼Helps develop the marketing mix

▼Aids in allocating resources to products

MARKET SEGMENTATION =

▼Dividing market into markets (segments), each of which behaves differently *vis-à-vis* your product

- ▾ Selecting certain segment(s)
- ▾ Developing one marketing plan for each segment
- → Thinking small(er)
  Should become reflexive

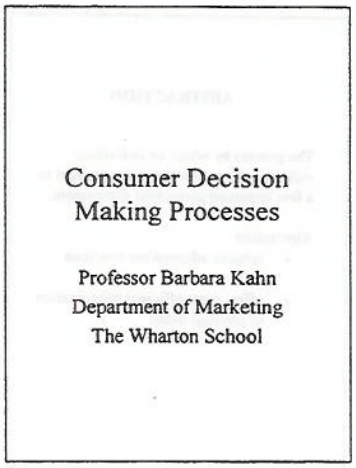


WHY THINK SMALLER?

1. If you don't, somebody will take your market
2. Can raise primary demand
3. Thinking of "holes in the market" is a useful mental exercise

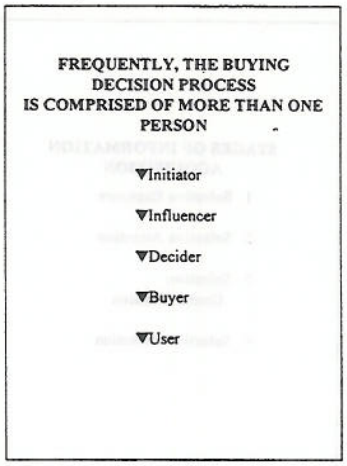
WHARTON REPROGRAPHICS

Lecture 5
Consumer Decision Making



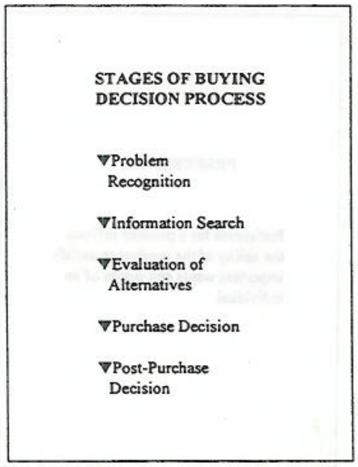
Consumer Decision Making Processes

Professor Barbara Kahn
Department of Marketing
The Wharton School



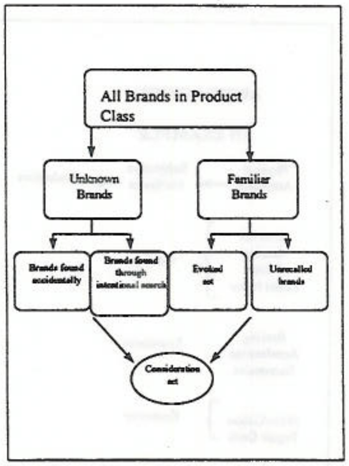
FREQUENTLY, THE BUYING DECISION PROCESS IS COMPRISED OF MORE THAN ONE PERSON

- ▼Initiator
- ▼Influencer
- ▼Decider
- ▼Buyer
- ▼User



STAGES OF BUYING DECISION PROCESS

- ▼Problem Recognition
- ▼Information Search
- ▼Evaluation of Alternatives
- ▼Purchase Decision
- ▼Post-Purchase Decision



All Brands in Product Class

Unknown Brands

Familiar Brands

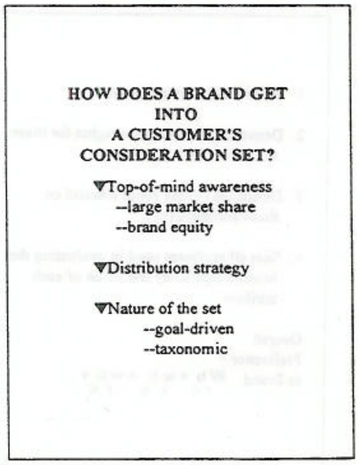
Brands found accidentally

Brands found through intentional search

Evoked set

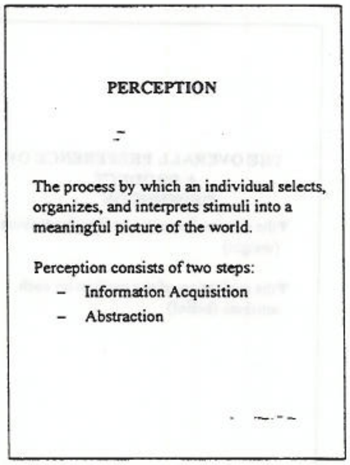
Unrecalled brands

Consideration set



HOW DOES A BRAND GET INTO A CUSTOMER'S CONSIDERATION SET?

- ▼Top-of-mind awareness
  - --large market share
  - --brand equity
- ▼Distribution strategy
- ▼Nature of the set
  - --goal-driven
  - --taxonomic



PERCEPTION

The process by which an individual selects, organizes, and interprets stimuli into a meaningful picture of the world.

Perception consists of two steps:

- Information Acquisition
- Abstraction

LECTURE 5
Consumer Decision Making

STAGES OF INFORMATION ACQUISITION

1. Selective Exposure
2. Selective Attention
3. Selective Comprehension
4. Selective Retention

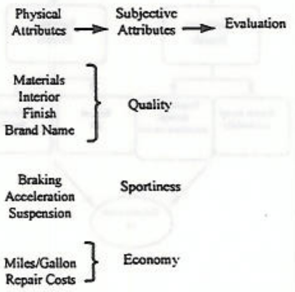
ABSTRACTION

The process by which an individual reduces information about the product to a few important perceptual dimensions.

Abstraction
- reduces information overload
- offers more efficient organization of physical detail

ABSTRACTION:

AN EXAMPLE


Physical Attributes
Subjective Attributes
Evaluation
Materials
Interior
Finish
Brand Name
Quality
Braking
Acceleration
Suspension
Sportiness
Miles/Gallon
Repair Costs
Economy

PREFERENCE

Preference for a product reflects the ability of the product to satisfy important wants and needs of an individual.

THE OVERALL PREFERENCE OF A PRODUCT DEPENDS ON . . .

- the relative importance of each attribute (weight)
- the evaluation of the product on each attribute (belief)

1. Identify relevant attributes
2. Determine importance weights for those attributes (Wi)
3. Determine beliefs about a brand on those attributes (bi)
4. *Sum* all attributes used in evaluating the brand weighted by the value of each attribute

Overall
Preference =
to Brand $W_1 b_{1j} + w_2 b_{2j} + w_3 b_{3j} + ..$

EXAMPLE

Importance Weights		Ultra Brite	Gleem	Crest	Colgate
(6)	Decay Prevention	2	7	7	4
(4)	Taste	6	6	4	6
(2)	Whitens Teeth	7	5	2	7

Attitude (Ultra Brite) $= 6 \times 2 + 4 \times 6 + 2 \times 7 = 50$

Attitude (Gleem) $= 6 \times 7 + 4 \times 6 + 2 \times 5 = 76$

Attitude (Crest) $= 6 \times 7 + 4 \times 4 + 2 \times 2 = 62$

Attitude (Colgate) $= 6 \times 4 + 4 \times 6 + 2 \times 7 = 62$

HEURISTICS - SIMPLIFIED RULES FOR MAKING DECISIONS

Simplify rather than Optimize

For example

1. Pick a minimum standard; eliminate all brands that do not meet minimum standard (Conjunctive)
2. Choose products if they exceed certain levels on key attributes (Disjunctive)
3. Preferences are based only upon the most important attribute (Lexicographic)

INVOLVEMENT

1. A critical factor in understanding consumer behavior
2. The degree of importance the consumer accords to the product or the purchase event.

DECISION CONTEXT AFFECTS PROCESS INVOLVEMENT

High Involvement:

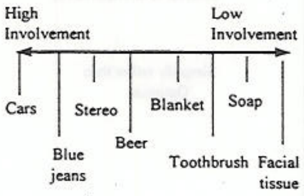
- ▼Usually purchase is infrequent, significant perceived risk
- ▼Customer usually actively seeks information
- ▼Customized decision process

DECISION CONTEXT AFFECTS PROCESS INVOLVEMENT

Low Involvement: Routinized response behavior

- ▼Purchase is familiar, inexpensive
- ▼Customer uses simplified heuristics
- ▼Highly selective attention to information
- ▼Quick decision

U.S. COLLEGE STUDENT SURVEY


High Involvement
Low Involvement
Cars
Blue jeans
Stereo
Beer
Blanket
Toothbrush
Soap
Facial tissue

IMPLICATIONS

Low involvement ⟶ hard to influence

Raise involvement
- ▼ Innovate
- ▼ Differentiate
- ▼ Target high-involvement segments

How?
- ▼ Advertise
- ▼ Support retailers (in-store promotions)
- ▼ Cut price
  induce trial ⟶
  habit

Lecture 6
Organizational Buying

WHARTON REPROGRAPHICS 8

Organization Buying Behavior/Personal Selling

Professor Barbara Kahn
Department of Marketing
The Wharton School

Business-to-Business Marketing

- Sales to businesses rather than end-consumers
- Example: IBM
  - **Business-to-Business**
    - sale of a personal computer to be used in an office environment
  - **Consumer Marketing**
    - sale of a personal computer for use by a student while at college

Classifying Goods for the Business Market

- I. Entering Goods
  - A. Raw materials
  - B. Manufactured materials and parts
- II. Foundation Goods
  - A. Installations
  - Accessory equipment
- III. Facilitating Goods
  - A. Supplies
  - B. Business services

DIFFERENCES BETWEEN BUSINESS-TO-BUSINESS BUYING BEHAVIOR AND CONSUMER BUYING BEHAVIOR

Business-to-Business	Consumer
Many people involved	Fewer people involved
Many different goals to realize	Individual-level goals (or maybe family)
Formal decision processes and information gathering	Less formal processes
Decision is explicit	Decision is often implicit

DIFFERENCES BETWEEN BUSINESS-TO-BUSINESS BUYING BEHAVIOR AND CONSUMER BUYING BEHAVIOR (continued)

Business-to-Business	Consumer
Higher risk	Limited risk
Rational	Not always "rational"
Price/Cost often most important	Psychological factors important
Competitive bidding and negotiation often occur	Generally fixed prices
Personal selling	Mass communications

Key Characteristics

- Market
  - derived demand
  - few customers
  - large purchase orders
- Product/Service Characteristics
  - frequently technical
  - predominance of raw and semi-finished goods
  - important: delivery time, technical assistance, post-sale service, financing assistance
- Marketing Mix
  - direct selling
  - price is often negotiated
  - advertising is often technical in nature

SIMILARITIES BETWEEN ORGANIZATIONAL BUYING AND CONSUMER BUYING

▼Satisfaction of *customer* needs drives market success.

▼Marketing program design combines same factors but in varying formats.

Who is in the buyer center?

- Initiator
- Gatekeepers
- Influencers
- Deciders
- Purchaser
- User

Bases of Power

- Reward Power
- Coercive Power
- Attraction Power
- Expert Power
- Status Power

How do you identify the powerful?

- formal authority
- observe communications
- disliked
- one-way information centers
- invisible

Decision Stages	New Task	Modified Rebuy	Straight Rebuy
▾Identification of needs	X		
▾Establish specifications			
	X		
▾Search alternatives			
▾Establish contact	X		
Set purchase and usage criteria	X		
	X		

Decision Stages	New Task	Modified Rebuy	Straight Rebuy
▾Evaluate Alternative Buying Actions	X	X	
▾Negotiate	X	X	
▾Buy	X	X	X
▾Use	X	X	X
▾Conduct post-purchase evaluation	X	X	X

NEW TASK
(Rarest, most glamorous type)

- ▼Big DMU (decision-making unit)
- ▼Lots of people involved
- ▼Lots of indirect influence
- ▼Slower-than-usual processes
- ▼Higher risk
- ▼Gather and weigh lots of information
- ▼Anyone can win
- ▼Performance matters a lot (not price so much)

Evaluation of Salespeople

1. **Opening the Sale**
   How were you acknowledged when you entered the store?

   How long were you in the store before you were acknowledged?

   What attitude would describe your initial welcome by the salesperson?

---

2. **Probing**
   Did the salesperson ask questions?

   Did the salesperson determine your needs?

   Did the salesperson interpret your needs and/or lifestyle?

---

3. **Closing the Sale**
   Did the salesperson ask you to buy?

   Did the salesperson ask for some other commitment from you?

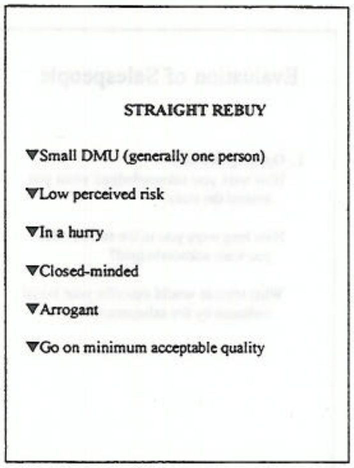
   Overall, how was your visit concluded?

Effective Salespeople in a New Task

- Listen, probe
- Understand DMU needs
- Are in early
- Come to be viewed as consultants "creeping commitment"
- Lots of time
- Lots of Analyses

THE ART OF LISTENING

- ▼Repeating
- ▼Summarizing
- ▼Tolerating silences
- ▼Interpreting and using non-verbal communication



STRAIGHT REBUY

▼Small DMU (generally one person)

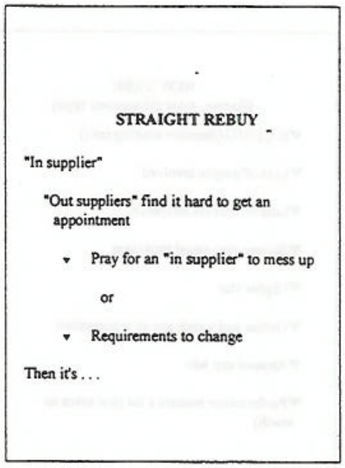
▼Low perceived risk

▼In a hurry

▼Closed-minded

▼Arrogant

▼Go on minimum acceptable quality



STRAIGHT REBUY

"In supplier"

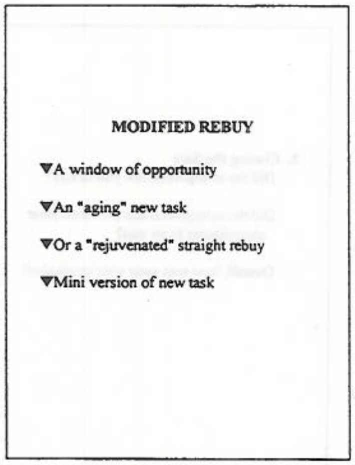
"Out suppliers" find it hard to get an appointment

- Pray for an "in supplier" to mess up

or

- Requirements to change

Then it's . . .



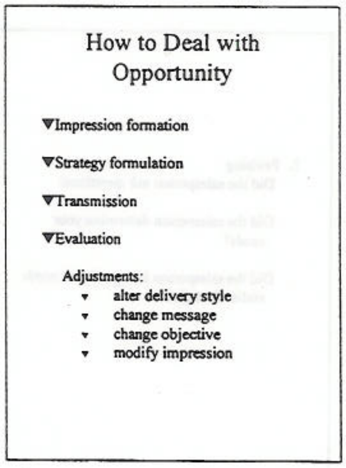
MODIFIED REBUY

▼A window of opportunity

▼An "aging" new task

▼Or a "rejuvenated" straight rebuy

▼Mini version of new task



How to Deal with Opportunity

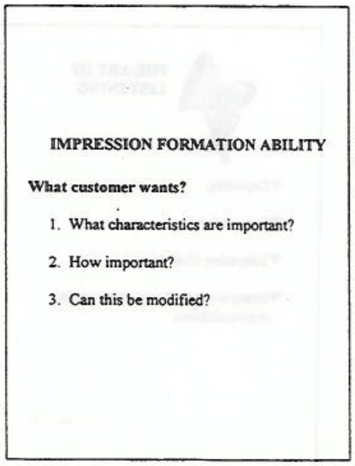
▼Impression formation

▼Strategy formulation

▼Transmission

▼Evaluation

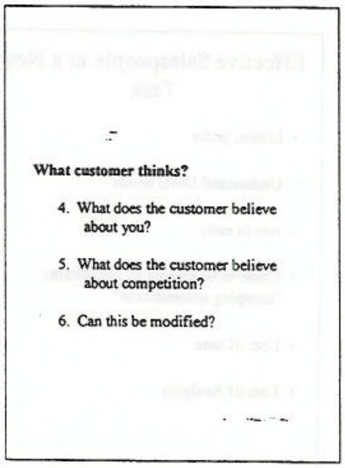
Adjustments:
- alter delivery style
- change message
- change objective
- modify impression



IMPRESSION FORMATION ABILITY

What customer wants?

1. What characteristics are important?
2. How important?
3. Can this be modified?



What customer thinks?

4. What does the customer believe about you?
5. What does the customer believe about competition?
6. Can this be modified?

How do good impression formers do it?

- Rich bank of good stereotypes
- categorize a prospect
- THEN:
  - contrast with their stereotypes

50% = bank of stereotypes

(= experience)

50% = ability to differentiate from stereotype

(= open-mindedness,
flexibility)

Strategy Formulation Ability

Given the impression, how can I:

A. maximize *relative* favorability toward my product?

B. change weights of characteristics?

C. change number of characteristics?
add some
cut some

Change set of competitors

Change beliefs: you

competitors

Caution: New task situation ***only***

slow, expensive

Lecture 7
Competitive Analysis

Competitive Analysis

Professor Barbara Kahn
The Wharton School

The Marketing Concept

- Focus on customer needs and wants
- Orient activities of firm to satisfy these needs
- Achieve long-term goal of customer satisfaction

TWO MAJOR GOALS

- Satisfaction of consumer needs
- Attainment of a competitive advantage over rivals

Marketing Expense vs. Marketing Investment Mind-Set

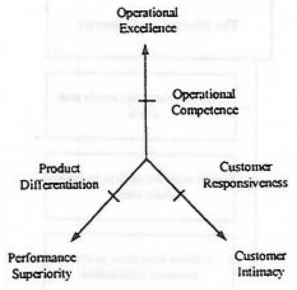
- Expense-Driven Managers
  - What are my projected sales figures for the next year?
  - Are my spending ratios (salesforce, advertising) on a par with competitors?
  - Am I gaining or losing share this year?
  - How can I reduce my marketing expenses?:

- Investment-Oriented Managers
  - What are our long-run marketing goals?
  - What returns am I earning from my marketing investment?
  - What is the quality of my market share – do I have customers who will stay with the product for many years?
  - Which new customers should I seek and which should I avoid?
  - What can be done to reduce customer acquisition costs and maximize my returns?

MARKET-DRIVEN PRINCIPLES

- Understand our markets
- Give the customer the final word
- Commit to leadership in the markets we serve
- Deliver total quality to guarantee customer satisfaction

STRATEGIES FOR LEADERSHIP*


Operational Excellence
Operational Competence
Product Differentiation
Customer Responsiveness
Performance Superiority
Customer Intimacy

* Adapted from CSC Index

FIRST:

What is view of these three strategies from the customers' perspective?

OPERATIONAL EXCELLENCE

- Benefits
  - Lowest price
  - Basic service convenience and reliability
  - Best response to service error
- Weaknesses
  - Limited variety
  - Less flexibility
  - Not state-of-the-art

PERFORMANCE SUPERIORITY

- Benefits
  - Best products on the market
  - Most innovative
  - Always one of the leaders in new technology, features
- Weaknesses
  - High price (but worth it)
  - Insufficient service response
  - Not as responsive to individual needs

CUSTOMER INTIMACY

- Benefits
  - Experts at identifying and satisfying customer needs
  - Tailored/customized products/ service
  - Personalized communication
- Weaknesses
  - Not the innovator, but a quick follower
  - A little more expensive
  - Some service glitches

OPERATIONAL EXCELLENCE

- **Strategy:** Price and convenience leadership
- **Examples:** (Henry Ford), Price/Costco, Dell Computer, GE Appliances, Walmart, Southwest Airlines, AT&T Universal's Card
- Commitment to consistent, everyday low price, reliability

Operational Excellence (cont.)

- Efficiency: effort and coordination, efficient transactions
- Management: top-down management
- Information technology
- Customer Service
- **Culture:** "One size fits all"

Performance Superiority

- **Strategy:** Offer leading-edge products and services that consistently push state-of-the-art or enhance a customer's use or application
- **Examples:** (Thomas Edison), Johnson & Johnson, Sony, Microsoft, Thermo Fibertek, Steven Speilberg, Nike, Intel
- Target R&D toward development of better performance
- Role of structure and performance

Performance Superiority (cont.)

- Direct portfolio: Receptive to new ideas; willingness to take risks
- Management: Decisive, yet risk-oriented, superior talented employees
- Educate potential customers about benefits of new ideas
- **Culture:** "Out of the box"

Customer Intimacy

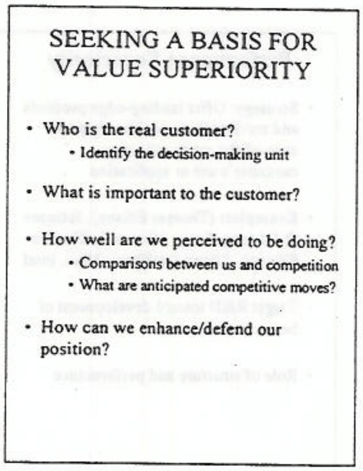
- **Strategy:** Micromarketing, continually surprising customer with customized products and services to fit an increasing finer def'n. of customer
- **Examples:** Cable and Wireless, Home Depot, Nordstrom, Airborne Express, Four Seasons, Ritz Carlton
- Extensive databases; deep customer knowledge

Customer Intimacy (cont.)

- Broad product line, configurable
- Organizations is empowered to make dec. close to the customer, "think"
- Hollow delivery systems
- Management: Operate like consultants
- **Culture:** "Have it your way."

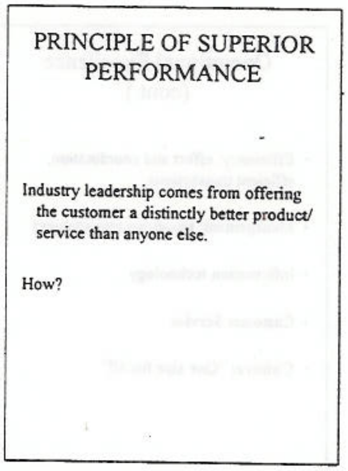
To stay ahead, you have to keep getting better.

What are potential threats/pitfalls to various types of strategies?



SEEKING A BASIS FOR VALUE SUPERIORITY

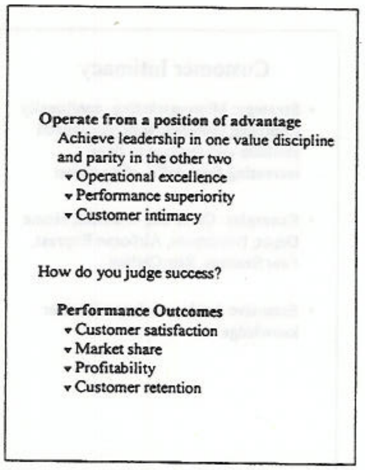
- Who is the real customer?
  - Identify the decision-making unit
- What is important to the customer?
- How well are we perceived to be doing?
  - Comparisons between us and competition
  - What are anticipated competitive moves?
- How can we enhance/defend our position?



PRINCIPLE OF SUPERIOR PERFORMANCE

Industry leadership comes from offering the customer a distinctly better product/ service than anyone else.

How?



Operate from a position of advantage

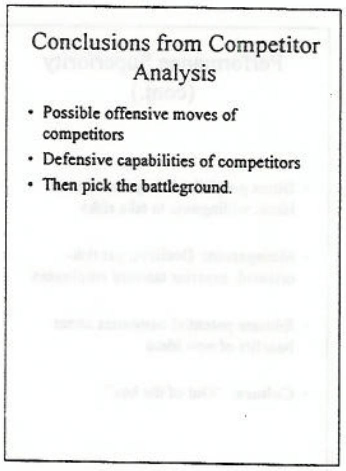
Achieve leadership in one value discipline and parity in the other two

- Operational excellence
- Performance superiority
- Customer intimacy

How do you judge success?

Performance Outcomes

- Customer satisfaction
- Market share
- Profitability
- Customer retention



Conclusions from Competitor Analysis

- Possible offensive moves of competitors
- Defensive capabilities of competitors
- Then pick the battleground.

Lecture 8
Marketing Research

10

WHARTON/[illegible]

MARKETING RESEARCH

PROFESSOR BARBARA KAHN
The Wharton School
University of Pennsylvania

PURPOSE OF MARKET RESEARCH

- ▼ The reduction of uncertainty about market needs or the responsiveness of customers to marketing actions or potential action.

MARKET RESEARCH

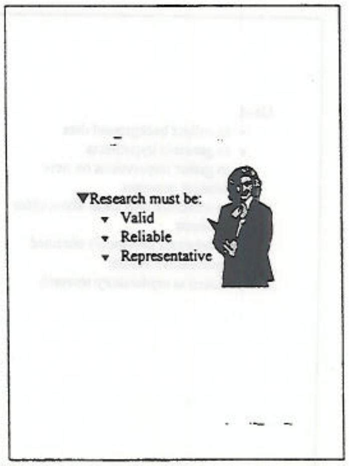
- ▼Begins with a problem definition
- ▼Ends with a report and action recommendation

ROLE OF RESEARCH

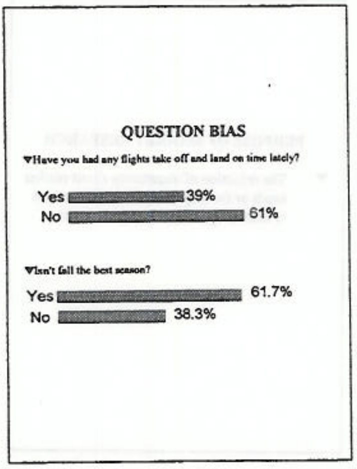
- ▼Input to the decision-making process
- ▼Cost of the research vs. the likely benefit
- ▼Must be used by management

COMMON MARKET RESEARCH PROBLEMS

- ▼ Potential demand for a new product
- ▼ Sales forecasting
  - ▾ Buyer/Analysis
- ▼ Segmentation
- ▼ Choice Processes and Information Processing
- ▼ Selecting among alternative combinations of marketing mix factors
- ▼ Customer satisfaction levels
- ▼ Optimal product features



- ▼Research must be:
  - ▾ Valid
  - ▾ Reliable
  - ▾ Representative



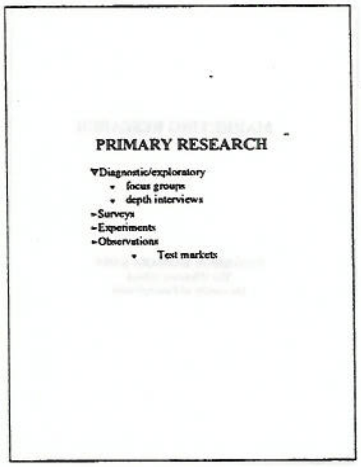
QUESTION BIAS

▼Have you had any flights take off and land on time lately?

Yes 39%
No 61%

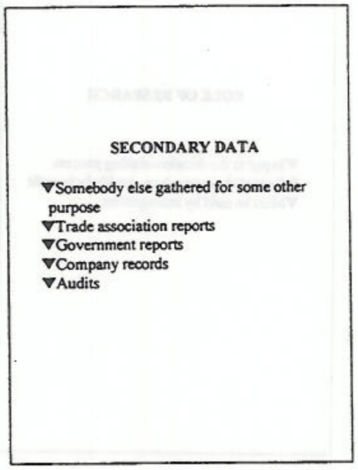
▼Isn't fall the best season?

Yes 61.7%
No 38.3%



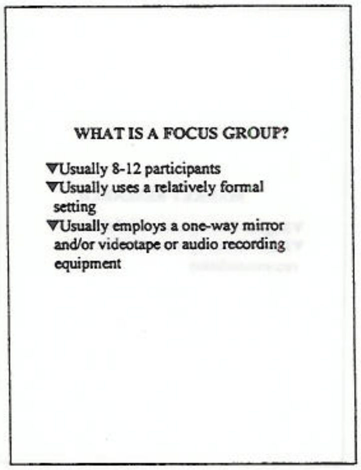
PRIMARY RESEARCH

▼Diagnostic/exploratory
  - focus groups
  - depth interviews
►Surveys
►Experiments
►Observations
    - Test markets



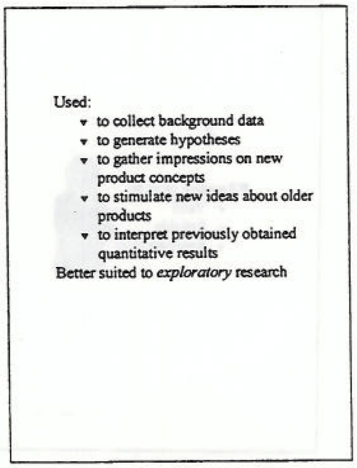
SECONDARY DATA

▼Somebody else gathered for some other purpose
▼Trade association reports
▼Government reports
▼Company records
▼Audits



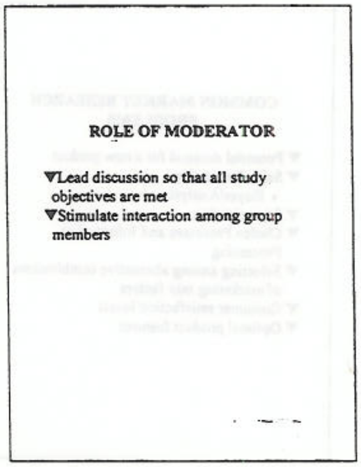
WHAT IS A FOCUS GROUP?

▼Usually 8-12 participants
▼Usually uses a relatively formal setting
▼Usually employs a one-way mirror and/or videotape or audio recording equipment



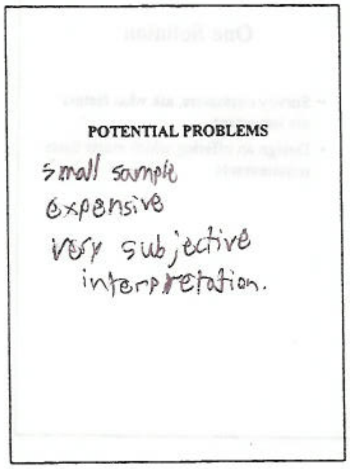
Used:
  - to collect background data
  - to generate hypotheses
  - to gather impressions on new product concepts
  - to stimulate new ideas about older products
  - to interpret previously obtained quantitative results

Better suited to *exploratory* research



ROLE OF MODERATOR

▼Lead discussion so that all study objectives are met
▼Stimulate interaction among group members

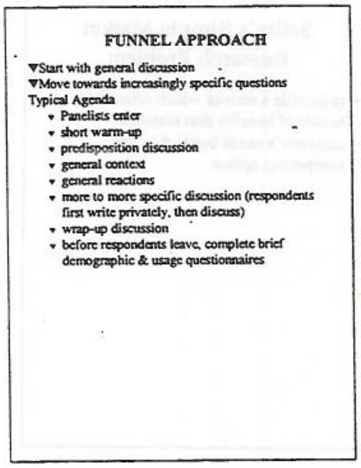


POTENTIAL PROBLEMS

small sample

expensive

very subjective interpretation.



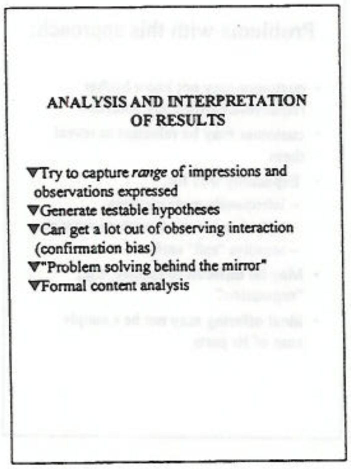
FUNNEL APPROACH

▼Start with general discussion

▼Move towards increasingly specific questions

Typical Agenda

- Panelists enter
- short warm-up
- predisposition discussion
- general context
- general reactions
- more to more specific discussion (respondents first write privately, then discuss)
- wrap-up discussion
- before respondents leave, complete brief demographic & usage questionnaires



ANALYSIS AND INTERPRETATION OF RESULTS

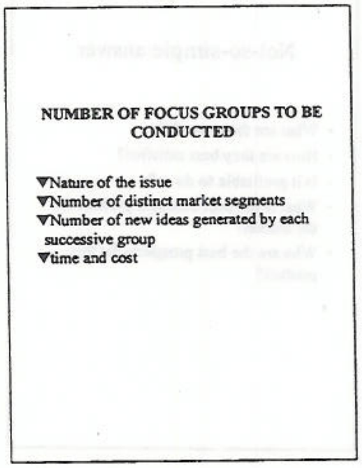
▼Try to capture *range* of impressions and observations expressed

▼Generate testable hypotheses

▼Can get a lot out of observing interaction (confirmation bias)

▼"Problem solving behind the mirror"

▼Formal content analysis



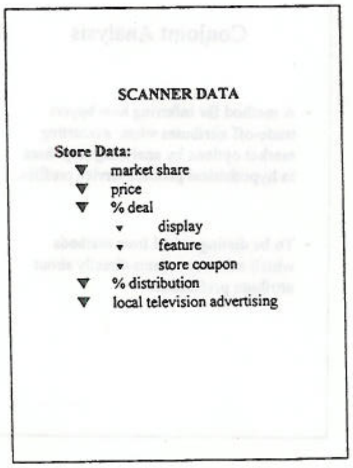
NUMBER OF FOCUS GROUPS TO BE CONDUCTED

▼Nature of the issue

▼Number of distinct market segments

▼Number of new ideas generated by each successive group

▼time and cost



SCANNER DATA

Store Data:

▼ market share

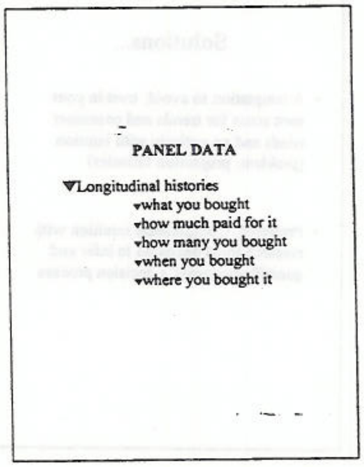
▼ price

▼ % deal

- display
- feature
- store coupon

▼ % distribution

▼ local television advertising



PANEL DATA

▼Longitudinal histories

- what you bought
- how much paid for it
- how many you bought
- when you bought
- where you bought it

Seller's Simple Market Research Problem

- to provide a serivce which offers that bundle of benefits that matches customer's needs better than any competeing option

One Solution

- Survey customers, ask what factors are important
- Design an offering which meets those requirements

Not-so-simple answer

- What are those needs?
- How are they best satisfied?
- Is it profitable to do so?
- What is the best commen product for the market?
- Who are the best prospects for this product?

Problems with this approach:

- customer may not know his/her requirements with any precision
- customer may be reluctant to reveal them
- Especially true for:
  - infrequently made decisions
  - lack of awareness of attribute variation
  - sensitive "soft" attributes
- May be difficult to specify, e.g., "reputation"
- ideal offering may not be a simple sum of its parts

Solutions...

- A temptation to avoid: trust in your own sense for trends and cosnumer needs and go entirely with intution (problem: projection fallacies)

- Preferred: Complement intuition with research tools designed to infer and quantify customer's decision process

Conjoint Analysis

- A method for inferring how buyers trade-off attributes when evaluating market options by analyzing responses to hypothetical product/service profiles.

- To be distinguished from methods which ask respondents directly about attribute preferences

… Imagine choosing a restaurant for a dinner with an important friend.

Basic Steps of Conjoint Applications

- define set of attributes and attribute-levels
- construct a set of hypothetical products from these attributes and levels
- have sample of relevant population evaluate each of these options
- calculate part-worth utilities
- conduct "what if" studies; segmentation studies; price sensitivity …. etc.

CONCLUSIONS

✓ Marketing research can usually help decision-making
✓ But it does not guarantee a correct decision
✓ At best: increases batting average
✓ Research must be:
    ▼ current
    ▼ unbiased
    ▼ valid
    ▼ reliable
✓ Ask the right questions!!

Lecture 9
New Product Strategies

11

WHARTON REPROGRAPHICS

New Product Strategies

Professor Barbara Kahn
Department of Marketing
The Wharton School

What Is A New Product?

- new to the world
- new to the company
- flankers
  - complements
  - line extensions
  - brand franchise extensions
- repositioning
- model changes

New Product Development

- most important strategic activity of any firm
- also, the most risky (most new product ventures fail)

Very Risky

- Study by Assoc. of National Advertisers (1984) --across all types of industries
  - 27% of line extensions failed
  - 31% of new brands introduced in categories where company already had a product failed
  - 46% of new products introduced to new categories failed
- Only 1 in 7 new product ideas are carried to the commercialization phase.

Famous Failures

- RJR Nabisco, lost $250 million on "Premier" -- smokeless cigarettes
- Federal Express lost more than $190 million on "Zap Mail"
- Polaroid lost over $68 million on "Polarvision" instant movies

Why Do New Products Fail?

- Poor planning and management
  - market too small
- poor concept
- poor execution
- poor use of research
- poor technology
- poor timing
  - changes in tastes/environment
- bad support from channel

Biases in New Product Decisions

- sunk-cost fallacy
- false consensus bias
- false attributions of causation

Why Do Products Succeed?

- top-management commitment
- start with the consumer -- not the factory
- intelligent use of research
- find a competitive advantage
- move quickly
- know when to get out
- accept, but carefully manage the financial risk

Five Critical Success Factors

- close to the market
- set the strategic direction
- stick to the knitting
- speed to market
- organizational support

….and LUCK.

Why is speed to market so important?

- markets are getting more specialized
- intensified competetion
- changing technology
- changing tastes
- rampant copying
- gaining shelf space early

R&D-Based Strategies for New Products

Superfast Innovation

- technology development
- product development
- market development

BUT

R&D isn't worth anything alone, it has got to be coupled with the market. The innovative firms are not necessarily the ones that produce the best technological output, but the ones that know what is marketable.

Marketing Research Process

- idea screening
- concept development and testing
- pre-test marketing
- test marketing
- launch monitoring

Idea Generation

- gaps:
  - are there unfilled current consumer needs?
- growth:
  - are there unfilled future needs?
- synergies
  - is there unfilled potential in the firm's existing roduct portfolio

Sources of New Ideas

- Technology
- Market Needs and User Solutions
- Competitors and Other Firms
- Channels of Distribution and Suppliers
- Management and Employees
- Environmental Changes

Concept Testing

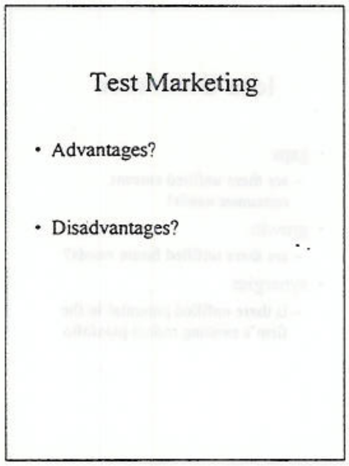
- Goal: to use primary market information to better define the product, forecast likely demand, and clarify target buyer.
- Procedures:
  - Focus Groups
  - Conjoint Analysis
  - Information Accelerator

Making Go/No Decisions: When to stop a bad idea

- Rule 1: remember the sunk cost fallacy
- Rule 2: set benchmarks for success beforehand and stick to them
- Rule 3: be sure to plan research so that it will allow you to diagnose the cause of problems

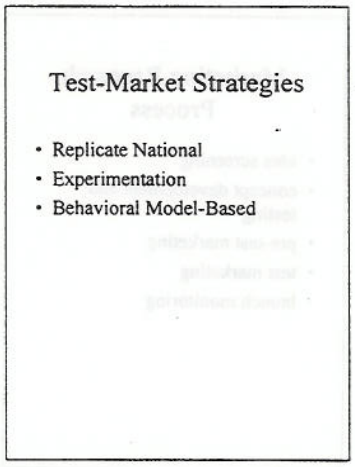
Testing New Products

- Advertising Testing
- Product Quality Testing
- Laboratory Tests
- Expert Evaluation
- Customer Tests
  - Single-Product Evaluation
  - Blind Tests
  - Experimental Variations



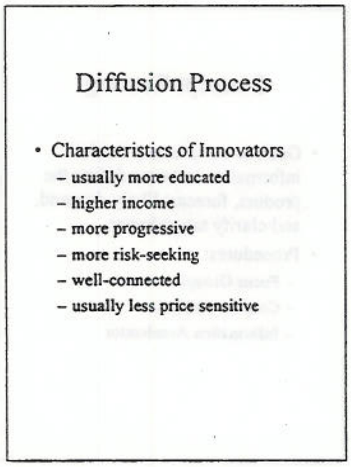
Test Marketing

- Advantages?
- Disadvantages?



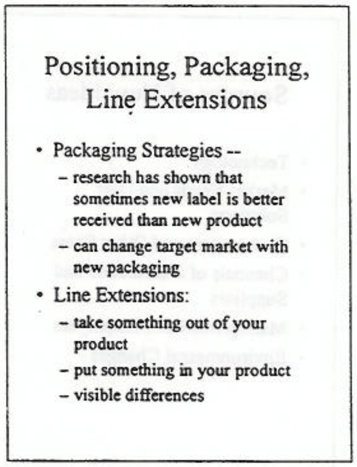
Test-Market Strategies

- Replicate National
- Experimentation
- Behavioral Model-Based



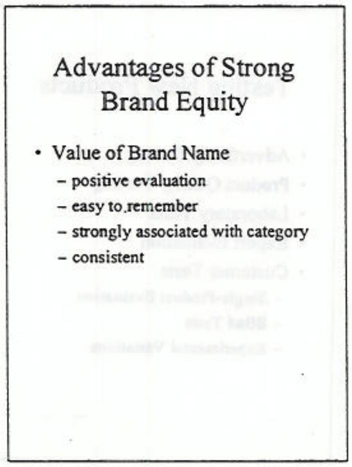
Diffusion Process

- Characteristics of Innovators
  - usually more educated
  - higher income
  - more progressive
  - more risk-seeking
  - well-connected
  - usually less price sensitive



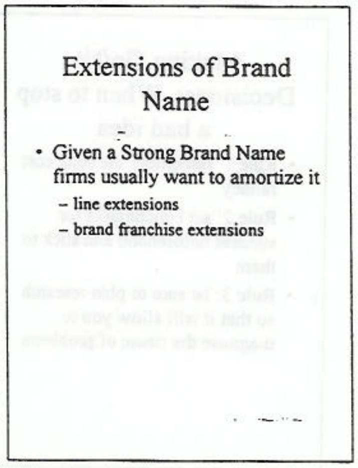
Positioning, Packaging, Line Extensions

- Packaging Strategies --
  - research has shown that sometimes new label is better received than new product
  - can change target market with new packaging
- Line Extensions:
  - take something out of your product
  - put something in your product
  - visible differences



Advantages of Strong Brand Equity

- Value of Brand Name
  - positive evaluation
  - easy to remember
  - strongly associated with category
  - consistent



Extensions of Brand Name

- Given a Strong Brand Name firms usually want to amortize it
  - line extensions
  - brand franchise extensions

Unsuccessful Brand Extensions

- if extension threatens the associations with the original brand
- if extension dilutes value of brand
- if extension confuses value of brand

Successful Brand Extensions

- Associations fit the new product
- new product is superior to others in the category
- transferred benefits fit the category

Co-Branding

- One time relationship
- Benefits of co-branding?
- Disadvantages?

Private Brands

- Advantages of Private Brands

- Difference between Private Brands and Generic Brands

Growth of Private Brands

- Depends on strength of retailer
- varies by product category
- supply-side activities
- consumer response to private labels
- positioning private labels

Lecture 10
Advertising

12

GRAPHICS

ADVERTISING

Professor Barbara Kahn
Department of Marketing
The Wharton School

PROMOTION MIX

- Advertising
- Sales Promotions (short-term incentives)
- Personal Selling
- Public Relations

ADVERTISING

- Paid form of non-personal presentation of ideas, product
- Main vehicle used to build image

FIRST, NEED TO SET OBJECTIVES

– e.g.,
- build awareness
- provide brand information
- persuade

TRADITONAL COMMUNICATION MODEL

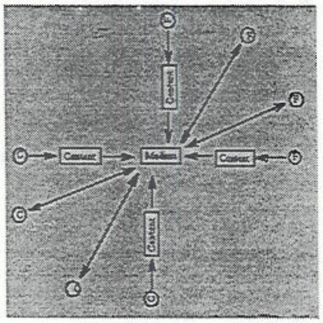
SENDER ▶ encoding ▶ Message ▶ decode ▶ Receiver

Reponse
Feedback

"Rules:"

1. Always start by considering receiver.
2. What is desired response?

New Many-to-Many Communications Model



Implications of New Communication Model

- user expects a degree of personal control of information
- individuals are active participants in communications (e.g., multiple feedback loops, immediate communication)
- navigation of the web results in a level of satisfaction and pleasure (I.e., flow)
- BUT "rules" #1 and #2 still apply!

MESSAGE STRATEGY

- Objectives
- Who is target market?
- What are current perceptions of the brand?

COPY STRATEGY STATEMENTS
Ultra Thick Ultra Lash / Maybelline

Target: Women 18-34. Heavy user of eye makeup, who views her eyes/lashes as an important part of her appearance. She prefers a waterproof mascara because it doesn't smudge or smear. She is somewhat sophisiticated in her look, is self-assured, and always willing to try new cosmetics.

MESSAGE

- What kind?
  - one-sided
  - two-sided
  - comparative
  - type of links
    - feedback
    - to other sites

2 sided
counteract
Negatives
as well as
extoll positives

HOW WILL MESSAGE BE DELIVERED?

- Message Appeal
  - rational vs. emotional
  - product-focused vs. consumer- focused

EXECUTIONS

Product-Oriented
Rational

- 1. Slice-of-life
- 2. Problem solution
- 3. Factual
- 4. Product comparison
- 5. Demonstration
- 6. News
- 7. Expert salesperson
- 8. Ordinary consumers

EXECUTIONS

Consumer-Oriented

Emotional

- 1. Sex
- 2. Music /Video
- 3. Humor
- 4. Animation
- 5. Celebrity spokesperson
- 6. Fear appeals

EXECUTION	Merit / Faults
Slice-of-Life	
Product Comparison	
Factual	
Problem Solution	
Demonstration	
Unknown Consumer	
Expert Spokesperson	
Sex	
Music	
Humor	
Animation	
Celebrity Spokesperson	

MEDIA

- Needs to fit with target market habits
- Needs to fit with product and message

SETTING THE ADVERTISING BUDGET

- Percentage of sales ratio
- Share of voice
- Market response
- Task methods
- Arbitrary . . . What can we afford?

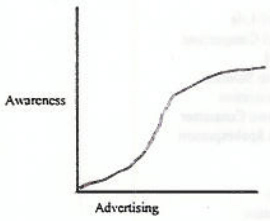
WHY WE CAN'T EVALUATE OUR SITUATION BY LOOKING ONLY AT OUR SALES

	Scenarios				
	#1	#2	#3	#4	#5
Awareness	20%	100%	100%	100%	67%
Interest	100%	20%	100%	100%	67%
Intention	100%	100%	20%	100%	67%
Availability	100%	100%	100%	20%	67%
Sales	20%	20%	20%	20%	20%

TRADITIONAL HIERARCHY OF EFFECTS

- Attention
- Interest
- Desire
- Action (trial, repeat)

WHAT IS THE RELATIONSHIP BETWEEN EXPENDITURE AND RESULTS?



WHEN AND HOW OFTEN TO ADVERTISE?

- Frequency -- depends on the complexity of the message
- Risk: wearout

HOW DO WE MEASURE EFFECTIVENESS OF ADS?

- Recall
- Recognition

- Theater tests
- Mock magazines

- Burke
- Starch
- Gallup

- Behavior
- Hits/ Click-throughs

Lecture 11
Channels

13

WHARTON REPROGRAPHICS

Channels

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Marketing Department
The Wharton School

Functions of a Market Channel

- Sorting
- Stockpiling
- Breaking of bulk

Functions Performed for Seller

- capital tied up
- obsolescence
- depreciation
- theft
- breakage
- storage
- insurance
- taxes
- personal selling
- building assortment

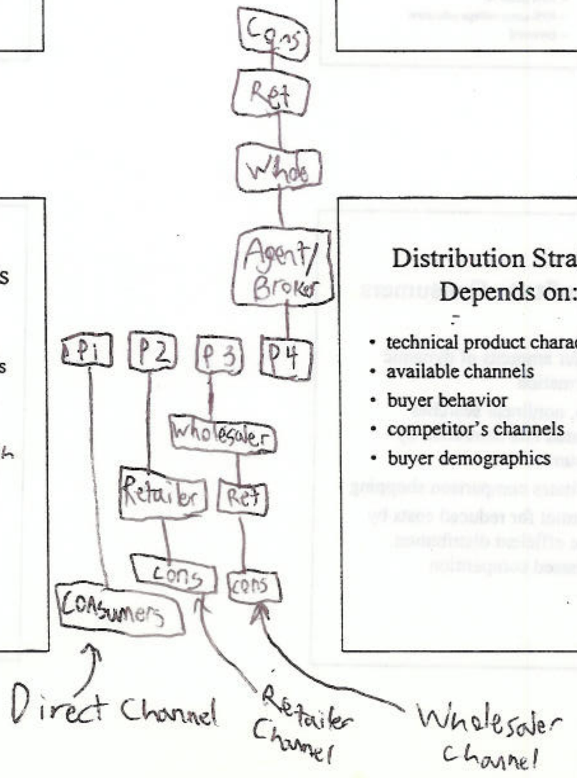
Routinizes Transactions

- Method, Type, Price
- reduces number of transactions
- reduces haggling
- more efficient

Expect "long" Channels

- configuration develops primarily for economic reasons

- buy in bulk
- too dificult to reach each consumer


Cons
Ret
Whole
Agent/Broker
P1
P2
P3
P4
Wholesaler
Retailer
Ret
Cons
cons
Consumers
Direct Channel
Retailer Channel
Wholesaler Channel

Distribution Strategy Depends on:

- technical product characteristics
- available channels
- buyer behavior
- competitor's channels
- buyer demographics

Distribution Strategies Change as Market Changes:

- industry maturity
- emergence of new market segments
- changing purchase behavior
- emergence of new channels
- emergence of large buyers

Growth of the Internet

- As of July 1995: 6.64 million host computers on the Net
  - 1.74 mill = .com
  - 1.41 mill = .edu
  - .30 mill = .net
  - .27 mill = .gov
  - .22 mill = .mil
  - .20 mill = .org
  - 2.37 mill = international hosts representing 150 countries

Growth of WebSites

- June 1993: 130 Web Sites
- July 1995: 23,000+ Web Sites
- Attractive Demographics (SRI 1995 study)
  - UPSTREAM (50%)
    - 77% male
    - 97% have some college education
    - upscale
    - (achievers)
  - OTHER HALF (50%)
    - 64% male
    - 70% under 30
    - 89% some college education
    - (strivers)

Barriers to Commercialization

- Convenience of access
  - consumer's ability to log-on
  - downloading time
  - congestion
  - speed
  - appropriate software
  - ability to search efficiently
- Security of information
- Accuracy of information on net
- Profitability

Benefits to Consumers

- greater amounts of dynamic information
- deep, nonlinear searches initiated and controlled by consumers
- facilitates comparison shopping
- potential for reduced costs by more efficient distribution, increased competition

Benefits to the Firm

- Direct distribution -- costs of delivery can be reduced
- Capture of customer information/monitor customer choices
- Ability to customize
- Ability to serve customer 24 hours/day

Classification of Commercial Web Sites

- On-Line Storefront
  - electronic catalog
- Flat Ads, Image and Information
- Content Sites: WSJ, Pathfinder, searchable databases
- Mall -- a collection of storefronts
- Search Agents (e.g. Yahoo)
  -

As change occurs, marketer has to decide on reaction

- commitment to existing channels
- resistance of channels to change
- inability to evaluate markets
- avoidance of conflict which threatens market position
- concern that competitors will take over existing channels

...Conflict may arise

- Why?
  - different goals and preference
  - varies by issue
- Overall conflict level
  - frequency *x* intensity *x* importance

Managing Conflict

- What are principal causes of conflict?
  - poor communications
  - different expectations
  - differences in perceptions
  - disagreement over who should do what (role clarity)

Degree of Distribution

- Intensive: product is placed in every outlet where potential consumers may want to buy it
  - package goods
  - appropriate for low-price goods
  - frequently bought with little thought
  - stimulates sales volume but tends to lower prices

- Selective: product is placed by screening dealer to eliminate all but a few in any single geographic area
  - strategically placed
  - e.g. furniture, apparel
- Advantages:
  - can select retailers
  - more control

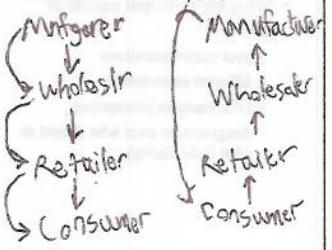
- Exclusive: product is available through one or a few dealers within a geographic area
  - usually only a single distributor
  - e.g., perfume, steuban glass, rolls royce
- Used for prestige items
- higher margins for retailers

Comparison

- Intensive
  - more intrabrand competition
  - feeble sales effort
  - lackluster interbrand competition
- Exclusive
  - less intrabrand competition
  - loyal, aggressive dealer
  - ferocious interbrand competition

Push vs. Pull Strategy

- PUSH
- PULL



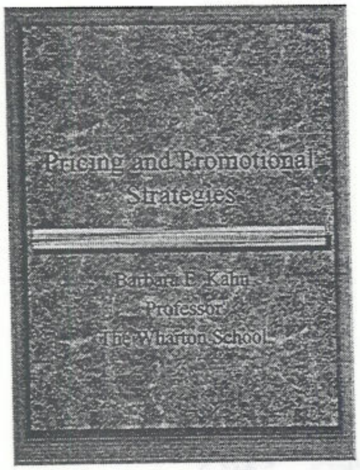
Summary

- channel of distribution:
  - set of people and organizations concerned with the flow of products from producers to customer
- channels:
  - play a pivotal role in modern marketing practice
  - key element in overall marketing strategy
  - results in greater efficiency in bringing goods to market

Lecture 12
Pricing and Promotional Strategies

14

WHARTON REPROGRAPHICS



Pricing and Promotional Strategies

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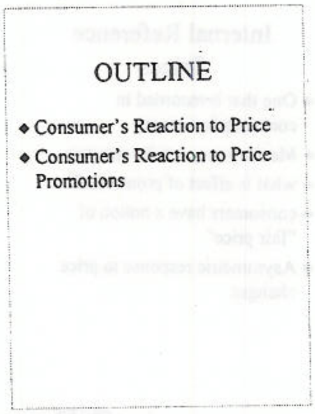
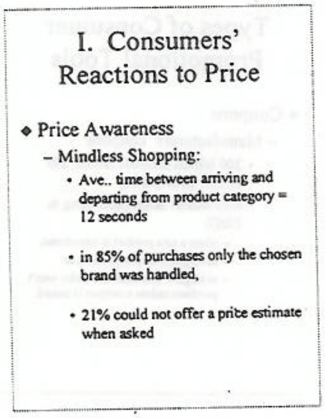


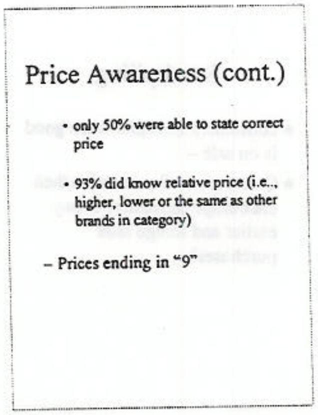
OUTLINE

- Consumer's Reaction to Price
- Consumer's Reaction to Price Promotions



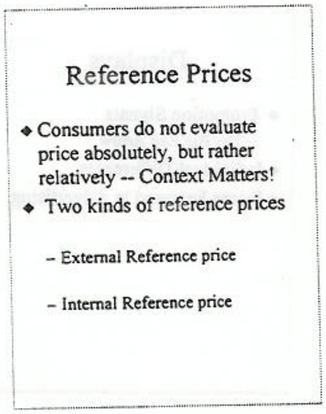
I. Consumers' Reactions to Price

- Price Awareness
  - Mindless Shopping:
    - Ave.. time between arriving and departing from product category = 12 seconds
    - in 85% of purchases only the chosen brand was handled,
    - 21% could not offer a price estimate when asked



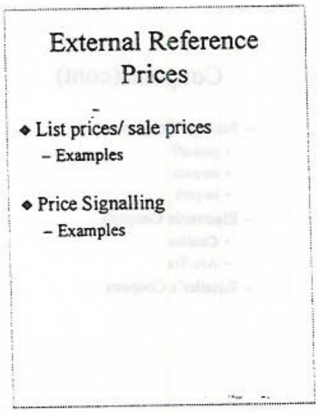
Price Awareness (cont.)

- only 50% were able to state correct price
- 93% did know relative price (i.e., higher, lower or the same as other brands in category)
- Prices ending in "9"



Reference Prices

- Consumers do not evaluate price absolutely, but rather relatively -- Context Matters!
- Two kinds of reference prices
  - External Reference price
  - Internal Reference price



External Reference Prices

- List prices/ sale prices
  - Examples
- Price Signalling
  - Examples

- acquisition utility
- transaction utility

Internal Reference Prices

- One that is recorded in consumer's memory
- Memory may not be accurate
- what is effect of promotion?
- consumers have a notion of "fair price"
- Asymmetric response to price changes

II. Consumer's Response to Price Promotions

- temporary price promotions cause significant short-term sales spike for brand being promoted
- Retailer's question: do price promotions increase overall sales for the product category?

Product category sales can increase as a result of price promotions
- deeper discounts increased variability in total category sales
- very frequent promotions did not affect overall category sales as much
+ Therefore overall category sales most likely to increase if brand promotions are deep but infrequent

Stockpiling

- consumers stockpile when good is on sale --
- Question: will promotion then encourage consumers to buy earlier and forego later purchases?

Types of Consumer Promotional Tools

- Coupons
  - Manufacturers' coupons
    - 300 billion coupons issued, 293 billion thrown away
    - only makes sense (according to P&G)
      - when a new product is introduced,
      - in response to competition, or
      - to target a consumer base who won't purchase unless a coupon is issued.

Coupons (cont)

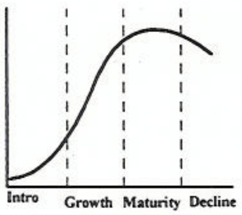
- Package Coupons
  - peel-off
  - on-pack
  - in-pack
- Electronic Coupons
  - Catalina
  - Acu-Tra
- Retailer's Coupons

Displays

- Promotion Signals
  - The Big Red Arrow
- Individual Differences
- Prices Featured in Advertising

Use of promotions depends on the stage of the

PRODUCT LIFE CYCLE..



Firm May Have 3 Principal Concerns:

- Wants to use price to compete
- Wants to price a product line strategically
- Wants to price to take advantage of consumer heterogeneity

Three Presumptions About Consumers

◆ Some are poorly informed in this product category

◆ Some are very price elastic in a category

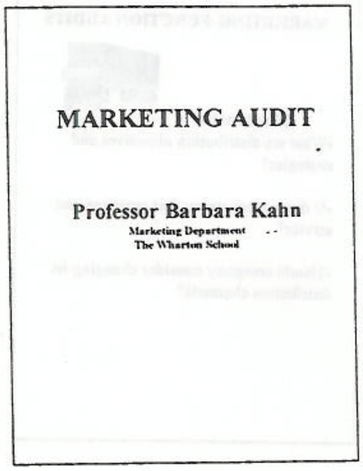
◆ Some have high "transaction costs" (other than search costs)

TAXONOMY OF PRICING STRATEGIES

	Vary price to consumers	Use price competitively	Balance pricing over product line
Consumers have high search costs	Random Discounting	Price Signalling	Image Pricing
Consumers have low reservation price	Periodic Discounting	Penetration Pricing	Price Bundling/ Premium Pricing
Consumers have high special transaction costs	2nd Market Discounting	Geographic Pricing	Complementary Pricing

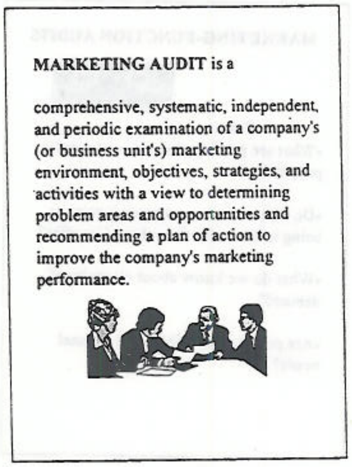
Lecture 13
Market Audit

WHARTON REPROGRAPHICS



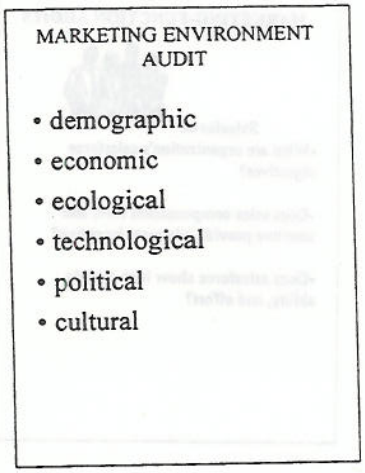
MARKETING AUDIT

Professor Barbara Kahn
Marketing Department
The Wharton School



MARKETING AUDIT is a

comprehensive, systematic, independent, and periodic examination of a company's (or business unit's) marketing environment, objectives, strategies, and activities with a view to determining problem areas and opportunities and recommending a plan of action to improve the company's marketing performance.



MARKETING ENVIRONMENT AUDIT

- demographic
- economic
- ecological
- technological
- political
- cultural

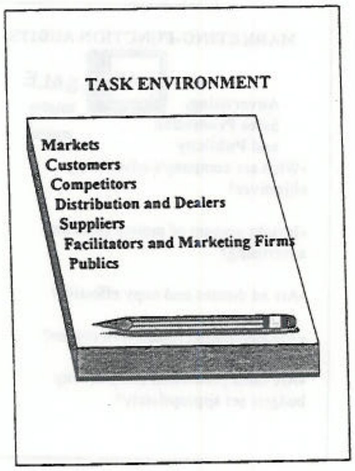
International
- Starts with one country, expands into others.

Global market
- start out thinking Globally

Most companies Global

Advantage - cost efficiency

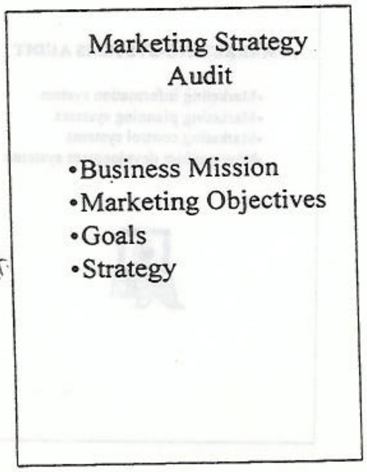
Disadvantage - ppl are different



TASK ENVIRONMENT

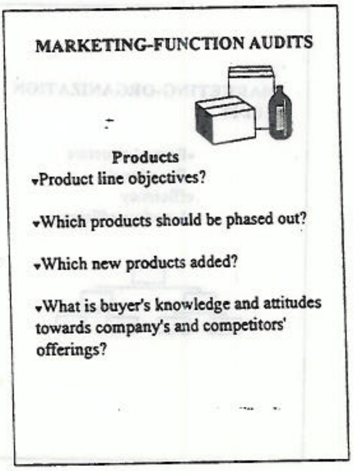
Markets
Customers
Competitors
Distribution and Dealers
Suppliers
Facilitators and Marketing Firms
Publics

3 Cs
- Company
- Customers
- Competitors



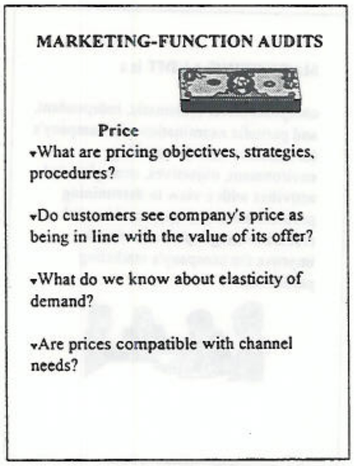
Marketing Strategy Audit

- Business Mission
- Marketing Objectives
- Goals
- Strategy



MARKETING-FUNCTION AUDITS

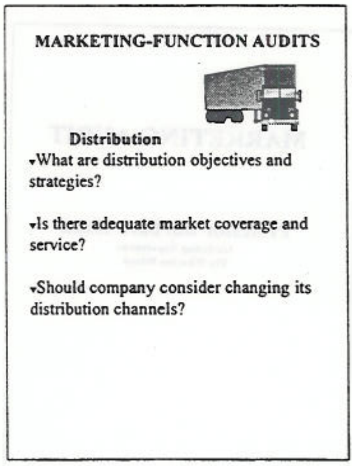
Products
- Product line objectives?
- Which products should be phased out?
- Which new products added?
- What is buyer's knowledge and attitudes towards company's and competitors' offerings?



MARKETING-FUNCTION AUDITS

Price

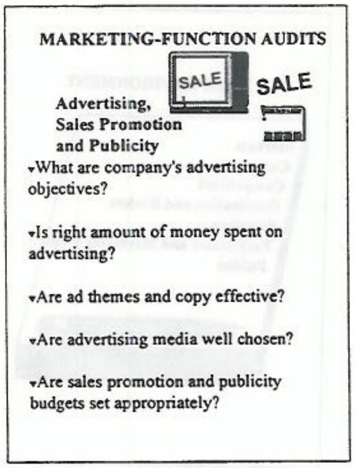
- What are pricing objectives, strategies, procedures?
- Do customers see company's price as being in line with the value of its offer?
- What do we know about elasticity of demand?
- Are prices compatible with channel needs?



MARKETING-FUNCTION AUDITS

Distribution

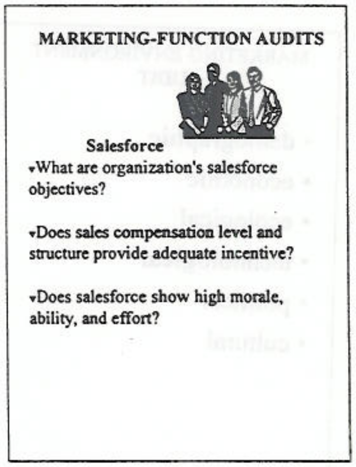
- What are distribution objectives and strategies?
- Is there adequate market coverage and service?
- Should company consider changing its distribution channels?



MARKETING-FUNCTION AUDITS

Advertising, Sales Promotion and Publicity

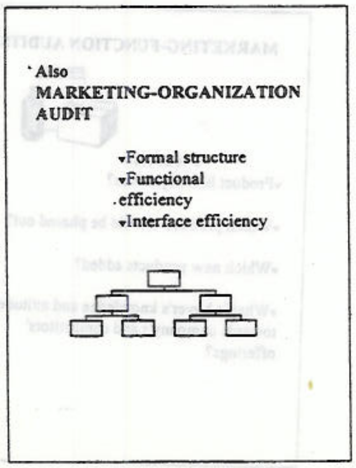
- What are company's advertising objectives?
- Is right amount of money spent on advertising?
- Are ad themes and copy effective?
- Are advertising media well chosen?
- Are sales promotion and publicity budgets set appropriately?



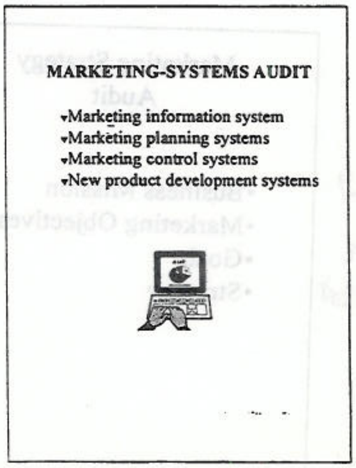
MARKETING-FUNCTION AUDITS

Salesforce

- What are organization's salesforce objectives?
- Does sales compensation level and structure provide adequate incentive?
- Does salesforce show high morale, ability, and effort?



- Also **MARKETING-ORGANIZATION AUDIT**
  - Formal structure
  - Functional efficiency
  - Interface efficiency



MARKETING-SYSTEMS AUDIT

- Marketing information system
- Marketing planning systems
- Marketing control systems
- New product development systems

MARKETING-PRODUCTIVITY AUDIT

- Profitability analysis
- Cost effectiveness analysis

Global Marketing Guidelines

- understand the culture and its values
- accept the culture
- reflect the Culture

Trends in marketing for the Future

- rapid, radical changes in technology
- globalization of business
- growth of entrepreneurship in new and existing organization
- increased deregulation
- increased micromarketing customization